

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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## Manufacturers' Record.

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RICHARD H. EDMONDS, President.  
THOMAS P. GRASTY, Vice-Presidents.  
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I. S. FIELD, Secretary.

RICHARD H. EDMONDS,  
Editor and General Manager.

EDWARD INGLE, Managing Editor.

THOMAS P. GRASTY,  
General Staff Correspondent.

Branch Offices:

New York—52 Broadway.  
Boston—170 Summer Street.  
Chicago—1114 Fisher Building.  
St. Louis—1023 Century Building.

Charleston, W. Va.—ALBERT PHENIS,  
Special Correspondent for West Virginia,  
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BALTIMORE, DECEMBER 5, 1907.

### GET BUSY!

Gentlemen—The "Big Noise" now is the  
"financial situation."

Folks are going about with faces as long  
as the undertaker's at a rich man's funeral,  
saying "What do you think of the financial  
situation?" and expecting everybody to weep  
in sympathy.

Now, as necessary as the "financial situa-  
tion" is to the business system, the business  
system of this country is strong enough that  
if "business" will just keep its wits it will  
bring the "financial situation" along like  
father leads a scared child soothingly to bed.

New York got scared and locked itself in  
the house and shouted hysterical alarm from  
the upstairs windows until the timid were  
infected with the fright and have run crying  
to their own shelters.

What's the use?

There is not a manufacturer in the coun-  
try who has exhibited any enterprise in get-  
ting business that has his orders filled as he  
should have them at this time of the year.  
There is no less business in the country than  
there was two weeks ago. Labor is earning  
just as much as it did two weeks ago. Good  
banks are as sound as ever.

The business situation was never so good,  
and the only hard times we need experience  
are the hard times to fill orders, if every-  
body will just cheer up and go on with their  
legitimate business instead of letting them-  
selves become scared by timid Tommy's  
howls of alarm.

Doubtless it is not a tiger but only old  
pussy suffering from too much canary.

Cheer up!

Get busy!

Yours truly,

THE VAN CAMP PACKING CO.  
Indianapolis, Ind.

The above letter, published in *Judi-  
cial Advertising*, has the right ring,  
and the Van Camp Packing Co., deter-  
mined to do business and to get its  
share of all that is going, has given  
orders to treble its advertising for 1908.  
The road and make a general forward

advance. There is going to be a fair  
share of business for everybody who  
goes after it vigorously. In some lines  
there may be some dullness, but  
other lines of work will open up  
new avenues, and a little less of the  
terrible pressure under which fac-  
tories and contractors were operating  
may prove a real advantage. For sev-  
eral years anybody could get business;  
now the live, hustling concern with ini-  
tiative will secure plenty, while the in-  
active, the timid, the "fearful folks,"  
may get left. To which class, gentle  
reader, do you belong?

### "HAS BEEN BEYOND PRAISE."

Mr. John H. Finney, manager of the  
Atlanta office of the Aluminum Com-  
pany of America of Pittsburg, Pa., writ-  
ing under date of November 20 to the  
MANUFACTURERS' RECORD, says:

Regarding your suggestion that we take a  
larger space in the MANUFACTURERS' RECORD,  
would say that personally I am very much  
in favor of it, because I am one of the firm  
believers not only in advertising, but one of  
the staunchest admirers of the MANUFACTURERS'  
RECORD that you have. I believe that  
the MANUFACTURERS' RECORD is doing a bet-  
ter work for the South than any publication  
of which I have knowledge. Its items re-  
garding construction work are the most val-  
uable that reach my office from any source.  
The entire tone of the paper is optimistic  
and uplifting, and your course throughout  
the recent and present financial flurry has  
been beyond praise. Up to the present time  
we have had absolutely no difficulty in sell-  
ing every pound of metal that we could  
make and in having an insistent demand for  
more than we were able to supply. This has  
been done with practically no advertising at  
all. We have, however, a much larger ca-  
pacity now, and I do believe that if our  
people in Pittsburg could be made to see the  
advantage of a publicity campaign it would  
materially help us in our effort to dispose  
of the larger product, and I think the result  
would be especially accomplished through  
the medium of the MANUFACTURERS' RECORD,  
and particularly throughout the South,  
where the trade runs to electrical conduct-  
ors. I find the MANUFACTURERS' RECORD in  
the hands of everybody in the South, and  
firmly believe that if we had a quarter page  
or one-half page, as you suggest, it would be  
worth our while.

### CRIPPLING THE RAILROADS.

Illustrating the fact that the rail-  
roads are still unable to keep up with  
the traffic of the country is a letter from  
Mr. S. W. Allerton of the First National  
Bank of Chicago in the *Saturday Even-  
ing Post*, in which, discussing the cur-  
rency situation, he says:

Our volume of currency in circulation is  
entirely adequate to the business of the  
nation. Let me illustrate this by saying  
that for months I have had 60,000 bushels of  
grain which I have desired to ship to the  
East; but when I attempted to get cars to  
move this grain I have unfortunately been  
up against the fact that the cars were not  
to be had. I could only get enough cars at  
any one time to move an insignificant frac-  
tion of the volume of grain I wished to ship  
at the time.

Despite this inability of the railroads  
to meet the traffic of the country, every-  
thing is being done to turn money away  
from railroad investments, whereas  
everything should be done to encourage  
the investment of money in railroad  
building and expansion.

### THE CALL TO THE CONSERVATIVE SOUTH.

In 1895 and 1896 the country was told that the chief trouble with business  
interests was the low price of farm products and of labor. The silver orators,  
some of them unquestionably in good faith and some of them demagogues of the  
most blatant kind, proclaimed free silver as a specific for all our business ills.  
Free silver, we were told, would advance the price of cotton from the starvation  
figures of that day; free silver would lift the grain-grower of the West out of his  
slough of despond; free silver would give the cattle-grower a better price for his  
beef; free silver would bring to the farmer higher prices for everything he pro-  
duces, to the great blessing of the whole country. Free silver, likewise, would ad-  
vance the rate of wages, and men would no longer have to toil at the low rates  
then prevailing.

We did not get free silver. We did get all the other things. Free silver went  
down in the wreck of a once great party, whose machinery had been captured by  
the Populists, but we got the higher prices for cotton. The Southern farmer for  
the last five or six years has been getting 10 to 12 cents a pound for his cotton  
against 5 and 6 cents between 1893 and 1903. The grain-grower and the cattle-  
raiser have likewise received the higher prices, which enabled them to pay off  
hundreds of millions of farm mortgages and to get in splendid financial shape.  
The whole agricultural interests of the country have been lifted to a higher plane  
than they had ever enjoyed financially. Labor has been more fully employed  
and at higher rates of wages. But in the midst of this period of higher prices  
and higher wages there has now come the cry that everything is costing too much;  
that labor must be reduced; that farm products must go down because of the  
burden of the cost of living. We no longer hear the cry that free silver is neces-  
sary to bring higher prices and thus advance prosperity, but that something is  
now needed to reduce the cost of everything which enters into consumption. And  
though they may not have so intended it, the demagogues—those who are agita-  
tors from lack of knowledge, and those who are agitators from pure, unadulter-  
ated cussedness—have accomplished the result. They have mainly been instru-  
mental in bringing about conditions which, by forcing thousands of people out of  
employment, by lessening the prosperity of the country, we already have a de-  
cline in some agricultural products. The cattle and hog raisers of the country  
have already seen a great falling off in the prices of their products; the cotton-  
grower, who might safely have counted upon 12 or 15 cents a pound for this  
year's crop, sees it bringing \$10 to \$25 a bale less than it otherwise would have  
brought him. The American farmer, so abundantly blessed as he has been during  
the last few years with better prices, all things considered, than ever before in  
the history of the country, finds that the agitators who have been telling him  
that railroads and corporations were the bane of his life have been just about  
as far wrong as was the free-silver cry of 1896. We got all that the free-silver  
people claimed that this country needed in the way of higher prices and pros-  
perity without free silver. Now the agitator has given us a taste of the down-  
ward trend of prices, and the farmers and all others who have followed his lead  
must share the responsibility for their great losses. It is quite certain that this  
agitation has already cost the cotton-growers of the South over \$100,000,000,  
which cannot be recouped, and fortunate, indeed, will be the cotton-growers of  
this section if their losses do not prove to be even greater.

The MANUFACTURERS' RECORD has persistently for years fought for higher prices  
for Southern cotton, and at the opening of this season it took the ground that  
the present crop ought to bring \$900,000,000 to the South. This would have been  
the result but for the financial conditions which so suddenly developed, and  
which are but the outcome of the agitation which has been carried on of late  
years against all business corporations. We have been sowing the wind, and  
now we are reaping the whirlwind. Every man who has not taken an active  
part, an aggressive stand against this wild agitation, this clamor against busi-  
ness, this fight of the political agitators seeking only their own aims and ends  
against railroads, is to that extent responsible, and must bear his share of the  
burden of the terrific cost which the country has had to pay. And not until the  
people of this country of every class, whether they be the men of money or of  
brains, or of brawn, or of all, recognize their responsibility, and to the utmost  
limit of their ability seek to turn the tide of public sentiment the other way,  
can we hope for a full return of sanity and prosperity. The pendulum has been  
swinging toward destruction. It must swing far in the other direction before  
there can be such a restoration of confidence to save the agricultural classes  
from a great decline in the value of their products, the laboring men from a de-  
crease in wages, with tens of thousands in idleness, and the merchant and the  
manufacturer and the banker from their full share of the losses.

It is possible for the people of this country to change almost over night the  
conditions now existing. It is possible for the South to take the leadership in  
this movement. If in every town and city of the South its people should gather  
in public meetings and proclaim their opposition to agitation against railroads  
and corporations, should bend their energies to upbuilding rather than to tearing  
down, and should pledge their united support to the great leaders in American  
finance and industry in the restoration of confidence and in protection to invested  
capital and to the right of every organization to seek protection under the Na-  
tional Constitution in Federal as well as in State courts against legislation which  
it regards as confiscatory, there would certainly come a mighty sweep of senti-

ment away from pessimism and unto optimism. Will the South lead? There are signs that it will. Great is the opportunity.

The Nashville American, under the heading "Let Tennessee Lead," says:

In the MANUFACTURERS' RECORD of Baltimore, issue of September 5, there was a splendid editorial headed "Call to the Conservative South." This editorial called attention to the fact that the business prosperity of the South was being endangered by the ceaseless and relentless warfare that was being waged against railroads, corporations, capital and industry. In consequence of this, railroad expansion is being halted, and industrial enterprises cannot be advanced as would be under better conditions. These conditions are as hurtful to the farmer and laboring man as they are to the merchant, the manufacturer or the railroads. When manufacturers are busy and railroads are expanding there is a greater demand for farm products and for labor, and better prices for both. Then why should not conservative business men, property-owners, men of affairs, come together and take a stand against these destructive policies?

If the business men, conservative farmers and mechanics of this State will come together and demand of the politicians that they turn from their radicalism and populism and help to build up and develop this great country, we will see genuine prosperity in this section as we have never seen it before. Capital will seek investment in our State, knowing it will be protected.

The Board of Trade and Manufacturers and Producers' Association of this city have started a movement to have a meeting of this kind held in Nashville about the middle of January, and we trust every commercial organization in the State will send a strong delegation of business men to this meeting. It is the purpose of the promoters to have at this State meeting no one who is connected with any public-service corporation, only men who are free of such entanglements.

In our opinion, no one thing had as much to do with our recent financial stringency and business unrest as the demagogic agitator who has stirred up hatred against railroads and large corporations and who has undertaken to cure imaginary appendicitis with the knife, when there was nothing the matter with the patient except a slight case of cramp colic, which could have been cured with a small dose of soothing syrup.

The business people of Texas are moving in the same spirit, and at a meeting of the Central West Texas Association of Commercial Clubs at Stamford resolutions were unanimously passed calling for less drastic laws and stating that "the development of the State is dependent upon the better equipment of the railroads and better service at their hands rather than in reduction of fares." So, too, the State Development Convention at Louisville, Ky., adopted resolutions calling for encouragement of investments in railroad building even to exemption from taxation for a definite period. Another sign of the times is a letter from a division of the Order of Railway Conductors to Governor Swanson of Virginia, urging him to restore the schedule of railroad rates in effect prior to October 11, 1907, because of their belief that under the present scale of rates the railways of the State cannot earn a fair and equitable remuneration and the fear that these conditions will work against the welfare of the railroad employees. The conductors are right, for the vast army of railroad employees must inevitably suffer severely in loss of wages and loss of work for thousands unless there be a change. The time has come to wake up if the South wants to see a quick return of its great prosperity.

#### PITTSBURG'S OPPORTUNITY IS IN THE SOUTH.

Judge E. H. Gary, chairman of the United States Steel Corporation, in a note to the MANUFACTURERS' RECORD referring to the purchase of the Tennessee Coal, Iron & Railroad Co., said:

We have a high opinion of the value of the properties of the Tennessee Coal, Iron & Railroad Co., and believe we shall be able to utilize them to great advantage to ourselves and to the community. Our examinations are not as yet complete nor our plans fully developed.

No one who is familiar with the vast extent of the coal and iron-ore properties of the Tennessee Company nor of the general mineral resources of the Alabama district could think otherwise of the purchase of this property by the Steel Corporation than as of very great value to that concern. Experts agree with the Wall Street Journal, which expressed its view of the purchase by suggesting that this deal practically eliminated all the water from the stock of the Steel Corporation, and yet there is one spot in the country which is very bitter and sore about this purchase, and that spot is Pittsburg. The first absurd statement that was put out from Pittsburg about the purchase was to the effect that it had been made by the Steel Corporation because of its enmity to Harriman, who had ordered basic rails of the Tennessee Company, and that by securing this property the Steel Corporation would be enabled to force Harriman to deal with it, and not with an independent corporation, as the Tennessee Company had been. Many people accepted in good faith the suggestion, absurd as it appeared on its very face, that, having bought the Tennessee Company, the Steel Corporation would refuse to carry out the contract of the former company to furnish rails to Harriman's roads. Other rumors equally absurd have been put out from Pittsburg in the effort to decry the value of

this purchase, and the latest which has come to our notice is the letter from Pittsburg to the Iron and Coal Trades Review of London, in which the correspondent undertakes to belittle the Tennessee Company's properties. He takes the ground that the Steel Corporation made a very bad bargain, having, according to his view, taken over the property only to save it from bankruptcy and thus to prevent a shock to the steel trade through inability of this company to meet payments for the construction work in progress. It is hardly conceivable that a man of ordinary intelligence acting as correspondent for such a publication as the Iron and Coal Trades Review could permit the prejudices of his environment to cause him to write such silly stuff. Pittsburg views with alarm the handwriting on the wall. It knows full well that the day of its complete domination of the iron and steel trade is over; it knows that with the same capital and the same skill at work in Birmingham as Pittsburg has heretofore had the development of the former will be on so great a scale as to lessen the preponderating position of Pittsburg in the metallurgical world. Jealous of other iron sections, it attempts to belittle their potentialities, but Pittsburg should remember that there is room enough in this country for all. It ought to be too big a place for such petty jealousies to be permitted to crop out. It ought to be broad and national enough in its spirit to rejoice that the long latent resources of the South, so slightly developed, are now to undergo so great a development. It ought to recognize that, with the United States Geological Survey, after years of study, reporting that there are in the Central South 10,000,000,000 tons of available ore, even though a considerable quantity of this is of lower grade and will not come into use for some years, while no one claims at the out-

side over 2,000,000,000 tons for the Lake Superior district, that the destiny of the South has been fixed by nature itself. It ought to be wise enough, knowing from experience the tremendous profit in the development of iron and coal properties, to join with the Steel Corporation in the purchase of coal and iron lands in the South, out of which, like the Steel Corporation, it may reap some of the vast profits that await fortunate investors in these properties. The people of Pittsburg have a great opportunity in the Southern situation, and if wise will become heavy investors there. They might then duplicate the profits made in ores in Lake Superior and Mesabi, in coal and coke in Connellsville and in iron and steel making in Pittsburg itself. Now is their opportunity.

#### A NOVELTY IN STREET CARS.

One of the chief problems which the street-railway manager finds himself obliged to solve is that of collecting fares. It may appear simple enough to the inexperienced, but the work of gathering nickels from the passengers is such as to demand the best thought and effort of operating officials. There are many fares missed, especially in cities, conductors failing to collect them either because of inattention or indifference to duty, or because on crowded cars passengers are overlooked, the conductor not being able to recollect who has and who has not paid the fare. Of course, there are some fares lost to the companies through its conductors pocketing them, but the extent of this "knocking down" is not so great as the average man may imagine. Yet the number of nickels lost honestly (as far as the employees are concerned, not the passengers) is sufficient to make a costly inroad upon the companies' gross receipts. Anyone who travels daily upon street cars must have observed how often fares are missed.

The latest method adopted to insure the collection of all fares is the production of a new vehicle called the "pay-as-you-enter" car. It seems to have had its origin at Montreal, Can., where it worked to such advantage as to elicit high praise from street-railway experts. Since then it has attracted attention in New York, Chicago and Buffalo, and in all these cities cars of this new pattern have been ordered. The characteristic difference of this car from the ordinary type lies in the arrangement of the platforms, which are remarkably large, being in the New York pattern at least seven feet six inches long by six feet wide. At the step a railing begins, dividing each platform into two parts, that adjoining the body of the vehicle being for the use of passengers getting off, while that nearest the dashboard is for those getting on. This latter section is large enough to hold 20 persons, each of whom has to pass around the railing to the side of the platform farthest from the step, where, on turning to the right, he finds a swinging door leading into the interior. Before entering he must pay his fare to the conductor, who stands on the outside of the rail and at the middle of the platform, just out of the way of passengers who may wish to alight. This mode of gathering fares renders it needless for the conductor to enter the car, but permits him to maintain his proper position on the rear platform to attend to the entrance and exit of passengers and to manage the bellcord. After passengers have paid their fares they must enter the car; none is allowed to remain upon the

platform, for it is kept clear for the entrance of others.

As might be expected, the new style of car has been criticized by some of those whom it was designed to aid and benefit. It was said that one passenger, on being slow about paying or by handing a note to be changed, could delay many others. On the other hand it was pointed out that such a passenger could be required to stand aside—the platform being large enough, besides being enclosed from the weather—until the others had paid and passed on, when he could be attended to. Again, it was said that passengers would soon be accustomed to have their fares ready, as they do at the stations on the elevated railways and in the subway, each being desirous to avoid delay for himself. Thus there would be no obstruction of consequence to the prompt movement of passengers entering the car, while the size of the platform permits of taking on as large a crowd as would ordinarily be found at the most busy stopping point. At rush periods it is anticipated that the desire to obtain seats promptly will cause all passengers to endeavor to have their fares ready, so that practically no delays will occur, even if 50 persons were to get on at one place.

If the pay-as-you-enter car demonstrates in the larger cities that it can do all its friends claim, especially securing for the companies more fares from those who should pay them, and also reducing the number of accidents to passengers, it is sure to achieve a speedy popularity with street-railway managers, and the demand for it may temporarily exceed the supply.

#### OVERSHOOTING THE MARK.

Col. J. M. Thornton of the Farmers' Union is quoted at Birmingham as saying "the South will hold 8,000,000 bales of cotton for 15 cents per pound." As more than 4,500,000 bales of cotton have come into sight since the opening of the present season, but two suggestions developed from Colonel Thornton's theory—either no more cotton of the present crop is to come upon the market, which is manifestly absurd, or the crop is very much larger than most folks suspected, in which event publication of estimates of the amount to be held from the market would have an effect exactly contrary to their purpose. It is hoped in any event that no Southern farmer will hold his cotton if holding will compel him to stay in debt, and if he is not in debt he has a right to hold until doomsday.

#### FOR TRADE EXPANSION.

Under the auspices of the Chamber of Commerce of Georgetown, S. C., there gathered in that city last week a convention of representatives of the Eastern Carolina river section to further congressional legislation for the deepening of the channel to Georgetown to at least 18 feet at low water and for the improvement of the rivers tributary to Winyah bay, so as to permit their safe navigation by steamers at all seasons of the year. It is estimated that the Pee Dee, the Santee, the Congaree, the Black Mingo, the Waccamaw and other streams tributary to the port of Georgetown aggregate 1000 miles of waterways that may be readily made important arteries of trade by steamboats. The enthusiasm displayed by the convention, reflecting the spirit for waterways improvement widespread in the country, was similar to that shown by a convention at Birmingham, Ala., a few days earlier, at which delegates from Alabama, Tennessee, Georgia, Florida and Mississippi



rapidly growing return of confidence. From the Southeast comes the following: "We believe that just as soon as this trouble is eliminated trade will go right ahead; in fact, we have made a great many quotations lately on the first item necessary in manufacturing plants, namely, engines and boilers, which indicates to our mind there will be lots of new enterprises started in this territory as soon as question of money is straightened out." From the middle of the South comes this expression: "The present volume of business should be maintained throughout the forthcoming year." Another point in the South says: "The prospects in our vicinity are fairly good on account of good crops, and we do not know of any reason why business should not be at least normal."

#### AWAKENING.

That the substantial citizens of Texas are awakening to the necessity for activity in politics is evidenced by the resolutions presented at the recent meeting at Stamford of the Central West Texas Association of Commercial Clubs for circulation among the various commercial organizations of Texas. The resolutions take the ground that the agricultural and commercial interests of the State are being retarded by unfavorable legislation, and that the tendency toward such legislation has its origin in the minds of politicians, who either disregard or do not appreciate the material needs of the State. It is argued that every legitimate dollar in Texas should have a square deal; that all capital invested, whether it be corporate or otherwise, is entitled to a just protection of the laws as long as it obeys them; that the railroads and other corporations are the most potent factors in State development, and that the progress of the State is dependent upon the better equipment of the railroads and better service at their hands rather than upon the reduction of passenger rates. A deep-seated lethargy among business men generally as to the affairs of the State is noted, and, for the purpose of overcoming that, the agricultural and commercial interests are asked to join in a movement seeking to give the State less legislation of an unfavorable kind and more that will encourage corporations that are willing to come into the State.

The resolutions in the main are excellent, but the whole effect of them will probably be negated by the following statement:

"We commend our Legislature and State officials for carrying into execution the demands of the State Democratic platform as adopted at its last meeting, but believing that the said platform was too drastic in its nature and inimical to the best interests of our State, we call upon the citizens of Texas to join in an effort to guard against the evils that now exist and to select men to represent them in the Legislature who are awake to the agricultural and commercial interests and demands, and not so alert to the cry of the demagogues and politicians."

If the Democratic platform was too drastic in its nature, it is difficult to understand how well-wishers for the State can commend the Legislature and State officials for putting into execution the demands of that platform. As long as legislative bodies and officials can feel that they will be commended for putting into execution too drastic platform measures it will be almost impossible to prevent demagoguery from dominating the affairs of the State and clogging its progress.

#### CHEERING.

With the idea of getting in close touch at this time with the exact business situation in all parts of the country, the Broderick & Bascom Rope Co. of St. Louis, Mo., had its many agents and other business houses which represent it make inquiries as to the opinions of business men in their several sections. Of those replying, 85 per cent. reported "good" or "fairly good," only 15 per cent. "bad," while three-fifths of the 85 per cent. unhesitatingly said "good" in capital letters. Excerpts from various letters also give an optimistic view of the situation and a

rapidly growing return of confidence. From the Southeast comes the following: "We believe that just as soon as this trouble is eliminated trade will go right ahead; in fact, we have made a great many quotations lately on the first item necessary in manufacturing plants, namely, engines and boilers, which indicates to our mind there will be lots of new enterprises started in this territory as soon as question of money is straightened out." From the middle of the South comes this expression: "The present volume of business should be maintained throughout the forthcoming year." Another point in the South says: "The prospects in our vicinity are fairly good on account of good crops, and we do not know of any reason why business should not be at least normal."

And so also from all other sections of the country have come equally encouraging reports, of which the following from a well-posted observer in New York city is characteristic of the general feeling:

"We must take into consideration at the present time the greater wealth and superior producing conditions of the country, which without question are many fold greater than in 1857, 1861, 1873 or 1892. The interests of the Federal, State, railroad and the greater industries are identical, and lack of confidence in the one destroys confidence in the other, but without any question we will all finally issue from this trial of confidence in due season."

#### KENTUCKY WANTS RAILROADS.

Among the resolutions adopted at the recent Louisville meeting of the Kentucky State Development Association was the following:

"That for the development of the natural resources of our State we believe that the construction of additional railroad mileage throughout the greater part of the State is indispensable; therefore, we respectfully recommend to the public, to county and municipal authorities, the most liberal attitude toward all transportation companies who in good faith and in strict conformity with the national and State laws undertake to furnish us transportation facilities.

"We believe that in order to attain the best results the public should be willing that investment in transportation facilities should be sufficiently profitable to attract capital, whether foreign or local.

"We believe that though in some sections of the State the public has assumed a hostile attitude toward the railroad interests, yet in view of the fact that many States have recently passed legislation so unfavorable to railroad interests that a liberal attitude of Kentucky citizenship and lawmaking bodies will secure for Kentucky extensive development in the way of railroad interest.

"We therefore recommend five years' exemption from all State, county and municipal taxes for all new railroad mileage which may be hereafter constructed in the State either by foreign or local railway companies, as we believe that all individuals or corporations who desire to develop the State by providing it with increased means of transportation should also be exempted from taxation for five years. We respectfully invite the fair and unbiased consideration of the whole citizenship of Kentucky to this important question, believing that with the earnest and honest support of the good people and lawmaking bodies of Kentucky the railroad mileage of our State may be doubled within a few years."

This resolution gives wider emphasis to the resolutions for progress adopted by the Board of Trade of Louisville, and is another of the indications steadily increasing in number of a revolution of substantial public opinion in the South from the

wild policies that have been favored by demagoguery.

#### RICHMOND BUILDING.

Indicative of the general activity at Richmond, Va., is a report of Building Inspector H. P. Beck of the building operations in that city during the four months, August, September, October and November. In that time there were issued 306 permits, representing expenditures of \$629,258, for new buildings, and 142 permits, representing \$69,032, for alterations and repairs—a total of 448 permits and \$698,291 of expenditures. The character of the improvements is suggested by the figures for new structures. Of the total 306 permits for such work, 64 were for brick dwellings costing \$231,900, 111 for frame dwellings costing \$110,632, three for apartment-houses costing \$71,000, one for a Young Men's Christian Association building costing \$60,000, one for a freight depot costing \$45,000, nine for stores costing \$31,700 and one for a church costing \$20,000.

#### ON HOLDING COTTON.

The Refuge Cotton Oil Co. of Columbus, Miss., has sent to its fertilizer customers and friends a neighborly letter which may profitably be taken to heart by even a wider circle of folks. Combating partly the assertion that anybody advising farmers to sell cotton at present prices is not a friend to the producer, the company says:

"We believe if a man has cotton on hand and owes debts against it, say, one-half of it, he should sell enough cotton to pay his debts and then hold the balance if he chooses to do so. We would like to see the farmers of this country get 15 cents for their cotton. No one would rejoice more than ourselves. Self-preservation, however, is the first law of nature. If a man has six bales of cotton and owes us an amount equal three bales, we are certainly a bear until he sells the three bales and settles up with us, and after he does this we are, at heart, a bull good and strong and will assist him in every way possible to get a good price for the balance of it. Everybody else is the same way. We are forced by circumstances to insist on his selling enough to pay us. We cannot otherwise conduct our business. We are needing the money that is due us for fertilizer, as we have heavy obligations to meet, otherwise our attitude would be different. Some people are taking advantage of the times who are able to pay and who were slow in their payments when times were good. They seem to be the only people who are profiting by the present money stringency. They are working a hardship on their creditors and the country at large. We are prepared to grant every legitimate extension asked by our friends who are loyal to the best of their ability. The point is to do the very best you can by us, and we will do the same by you. This is the way to get along during hard times. Hold your own cotton, but don't hold somebody else's cotton. Be absolutely fair about it."

A bit of pure, unadulterated and timely sanity.

#### THE COTTON MOVEMENT.

In his report for November 29, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 90 days of the present season was 4,529,075 bales, a decrease under the same period last year of 1,107,804 bales. The exports were 2,391,664 bales, a decrease of 437,654 bales. The takings were, by Northern spinners, 520,727 bales, a decrease of 155,860 bales; by Southern spinners, 718,196 bales, a decrease of 9819 bales.

#### CONSERVATIVE.

In its issue of August 29 last the MANUFACTURERS' RECORD estimated at \$7,000,000,000 the 1907 wealth production of American farms. The conservatism of our estimates is again emphasized in the fact that Secretary Wilson of the Department of Agriculture places in his annual report the value at \$7,412,000,000.

#### CORRECTION.

In our issue of November 21 the statement was made that the Rockingham Power Co. of Rockingham, N. C., expected to develop 28,800 horse-power for delivery to customers from its operations on the Yadkin river. We are informed that the power available will be 30,000 horse-power.

#### TEXAS PROPERTY VALUES.

This year's assessed value of property in Texas is \$1,635,000,000. Capt. W. R. Davie, State Tax Commissioner, is quoted to the effect that under the new assessment laws next year's valuation should reach \$3,000,000,000.

#### The Whitney Company.

Mr. George I. Whitney of Pittsburg, Pa., president of the Whitney Company, and Messrs. J. B. Finley, C. S. Ritchie, J. B. McClelland, A. W. Herron and F. L. Stephenson, directors of the company, have resigned. Messrs. G. L. Stout, L. G. Young, W. D. Sargent, J. S. Henderson and A. O. Brown have been elected directors to succeed those named, and Edward F. Buchanan of Messrs. A. O. Brown & Co., 30 Broad street, New York, has been elected president to succeed Mr. Whitney. The Whitney Company is a \$10,000,000 corporation, details of whose plans have been stated previously and referred to frequently by the MANUFACTURERS' RECORD. It is developing 40,000 horse-power, to be transmitted by electricity, on the Yadkin river near Whitney, N. C., and a second development to furnish 36,000 horse-power is to be undertaken. The company also owns 14,000 acres of land, which will be developed for manufacturing and other industrial purposes, the establishment of townsites, etc.

#### Proposed Water-Power Development.

The Youghiogheny Light & Power Co. will be capitalized at \$200,000, and proposes to develop water-power on the Yough river and Muddy and Deep creeks, near Oakland, Md. This company was incorporated some time ago by Messrs. Hiram P. Tasker, Alfred G. Sturgis, Truman West and others. Its proposed development is located in a coal region, where it is contemplated to distribute electricity for power and lighting. The plant will be located at a point where the river has cut a gorge 300 feet deep between the mouths of the creeks, giving them a fall of 300 feet and the river a fall of 200 feet. No dams will be required, and pipes will receive the water above each fall and convey it to impulse water-wheels at bottom of each pipe line in the plant. Mr. Tasker, Hotel Manhattan, Oakland, Md., is president.

#### Machinery Men to Meet.

The next convention of the Southern Supply and Machinery Dealers' Association, the American Supply and Machinery Manufacturers' Association and the National Supply and Machinery Dealers' Association will be held at Richmond, Va., May 13-15. The officers of the Southern Supply and Machinery Dealers' Association, which will be largely concerned in making the convention a success, are Messrs. C. H. Briggs of Briggs-Weaver Machinery Co., Dallas, Texas, president; J. C. Miller of the Miller Supply Co., Huntington, W. Va., first vice-president;

E. A. Peden of Peden Iron & Steel Co., Houston, Texas, second vice-president, and Alvin M. Smith of the Smith-Courtney Company, Richmond, Va., secretary and treasurer.

### COMMERCIAL CHARLESTON.

#### The South Carolina City's Campaign for Greater Trade.

[Special Cor. Manufacturers' Record.]

Charleston, S. C., November 23.

This fine old Southern city, while filled with memories and monuments, is nevertheless instinct with modern life, and is busily marshaling her legions for battle with the problems of progress that now immediately confront her.

Life came so easy to Charleston in the old days that her people have been somewhat slow to change their habits to meet new conditions, and have, therefore, it must be confessed, fallen a little to the rear. Of course, it is not meant that the rear position is actual. It is only relative to the position that a city so richly endowed by nature would have achieved had her people sooner adopted less conservative modes of business procedure.

From early colonial days Charleston was a favored spot commercially. Ships from every port sailed into her harbor to exchange their cargoes of import for cargoes of export, and the city became by natural right one of the chief trade centers of the country. Great cotton firms bought the staple from the fields in the interior and shipped it in through Charleston to foreign mills. Great jobbing houses received here the goods and wares from the world's marts and distributed them among the retailers in all the region round. The ship-owners grew wealthy, the wholesalers waxed rich, and the banks of Charleston were counted among the most substantial financial institutions in the country. The continuation of the same methods of business from generation to generation, and always with success, begat among the people of Charleston a conservatism that was not to be broken through easily, and when changed conditions brought about the necessity for changed methods, if the city's position of advantage was to be maintained, it is small wonder that the new conditions should have been accepted and the new methods adopted with some degree of hesitation.

But once the decision was made to accept and adopt, with the precipitant spirit of the Charleston famous in other affairs, the plunge was taken, and now a campaign for a greater city is being organized along lines of the most approved industrial endeavor. The men at the forefront of the movement bear the old names, while they embody the new spirit, and if there is anything in the force of heredity—which who can doubt?—they will strive as determinedly on the new field of endeavor as ever did their sires upon the plains of the old.

When the export business of the city began to fall away, as it finally did, those most at interest for some time accepted the fact without inquiring into the cause, or, if inquiring, without seeking to remove it. Finally, however, this business decreased until the fact could be no longer quietly ignored, and the time had come for either action or surrender. Well, Charleston, as everybody knows, never surrenders. So the leaders of thought and action in the world of business began to study the situation with a view to bringing about a better state of affairs. They saw, in the first place, that hundreds of thousands of bales of cotton from the fields that had formerly shipped their product to market through this port were being largely consumed by the mills that had been built alongside the fields, while a large part of the remainder was being diverted by the railroads to

those ports which were exhibiting greater eagerness to get it. They found also that other articles had been so diverted, and that their imports, while maintaining a large aggregate, were showing the effect inevitably produced when ships that come in loaded must go away with empty holds. So they set about to work to bring about a change, and so not only resume the position so long held by the city, but to build it up to a still greater eminence. And in doing this work they have set out to pursue a safe and logical course.

Among the first things done was the establishment of a freight bureau for the purpose of bringing about an equality of rates and the best possible service in shipping. This bureau is presided over by Mr. H. R. Jackson, a most efficient and painstaking man, who acquired a wide knowledge of the freight business from long service in the freight department of a railroad, and he has been already instrumental in bringing about some much-needed reforms. At the same time the bureau has been collecting statistics that have proved of great value in locating the seat of various difficulties and pointing out the remedy. One thing that was soon shown was that 40 per cent. of the cars used in shipping from the city the freight that seeks an outlet inland were being hauled into Charleston empty. These facts were laid before the railroad managers, and the false economy of such procedure was pointed out. To some extent the troubles have been remedied, and a general freight department established here by one road gives promise of great benefit to the general shipping interests of the city in the near future.

These efforts are to be followed up by a campaign of publicity, designed to let the world know what advantages Charleston has to offer as the location of commercial enterprises and the seat of industrial establishments.

Charleston has indisputably one of the best harbors on the Atlantic seaboard. With 28 feet of water in the shallowest place on the bar at low tide, it has 33 feet when the tide is full, thus providing ample depth for the entrance of vessels of the heaviest draft. Once inside the harbor the depth is considerably greater, and there is space enough for the vessels of a mighty fleet to ride at anchor at a safe distance one from the other. In speaking of Charleston harbor recently Admiral Dickens of the United States Navy said:

"The harbor is a commodious one, and the water on the bar will now permit any of our battleships to enter this port. The flagship Texas has the distinction of being the first battleship to enter this port. As is well known, there is 30 feet of water on the bar at high water. After entering the harbor 50 battleships with 26 feet draft can be anchored in Charleston harbor at single anchor 400 yards apart, with a scope of 40 fathoms of chain. Sixty-five battleships with the same draft and with the same scope of chain can be moored in Charleston harbor 1000 feet apart. Thirty-five battleships can be moored above the battery."

In connection with the possession of such excellent shipping facilities it is pointed out that Charleston is nearer than any other deep-water port to many of the centers of commerce and manufacture—Louisville, Memphis, Greenville, Birmingham, Atlanta, Augusta, Montgomery, Chattanooga, Knoxville, Greensboro, Columbia, Charlotte and Macon; that it is nearer to St. Louis than any other except Baltimore, and only slightly further away from Chicago and Kansas City. Inevitably the bulk of the freight traffic to and from the seaboard must finally be regulated by the actual short haul, in which

event Charleston will reap large profit from her natural position. This is also nearer to Cuba and Panama than any other important United States port.

But the Charleston people, while looking forward to the time when their city will re-establish her pre-eminence as a port, are not idly waiting for its arrival. Meantime they have made it pre-eminence in other ways. One of these is in the manufacture and shipment of fertilizers. In and about the city are 11 plants, owned by five or six different companies, all engaged in the manufacture and shipment of this necessary commodity. They make and ship about 400,000 tons annually, bringing into action about \$7,500,000. During the busy season, which is in the late winter and early spring, these factories employ several thousand laborers and pay out a great deal of money in wages. The phosphate rock, which is the basis of the fertilizers, is mined within a few miles of the city. The manufacture of the fertilizers consists in grinding the rock and mixing it with guano, nitrates, cottonseed meal and other substances, according to the needs of the particular soil to be enriched and the particular crop to be grown.

An industry comparatively new to Charleston in anything like its present importance is the manufacture of lumber. Of course, there have been sawmills in the city from the first, but not until recent years has the sawing of lumber been carried on here to an extent that gave it standing among the really important industries. Now, however, it has moved up to the front rank, and is growing rapidly to still larger proportions. In the city limits and close around them are mills that last year sawed 105,000,000 feet of lumber. Of this, 85,000,000 was sent into the export trade, the remainder being used to meet local demands. There are planing mills and other woodworking establishments that accompany the reduction of the log to sawed stuff, and all of which give employment to labor and help swell the payroll.

One of the most important enterprises now being carried on here is that of the Federal Government, which is fitting up a magnificent navy-yard two and a half miles outside the city limits. The site is on the west side of the Cooper river, where 2233 acres of land was purchased at a cost of \$104,507, being the largest area attached to any of the Government's navy-yards. Some of this consists of marsh lands, but part of it was formerly a park belonging to the city, and is a heavily-wooded, rolling tract of great natural beauty. One large drydock has been completed at a cost of \$1,250,000, and others will be added as required. Officers' houses and other buildings have been erected and are being erected and other improvements made. The first estimate of the cost of land and improvements was \$10,000,000, but the plans have been changed until now it is thought \$15,000,000 will be spent before the work is completed. When finished the yard will give employment to 2000 men, creating a payroll of many thousands of dollars a month.

The jobbing business of the city, always good, has received a new impetus recently from the injection of new blood, and the amount of sales is growing right along. Groceries, shoes, hardware, dry goods and notions, all are represented in the jobbing line by strong concerns, managed in a thoroughly up-to-date manner. The jobbers have recently joined with the manufacturers and bankers in the organization of an association for the extension of trade, and their efforts are meeting with the success that organized effort always brings.

An oyster-packing concern is doing a large business here, catching, shucking and

canning the oysters taken from the many bays and inlets in which the coast abounds. The industry gives employment to 700 people, fishermen and house laborers, during the season, and is a growing one. The canning part of the business is turned to the preservation of fruit and vegetables in their season, thus keeping men and machinery busy the better part of the year.

These are, of course, but a few of the more salient features of the commercial and industrial life of the city. Many other manufacturing plants and jobbing houses are doing profitable business here, but these lines mentioned may be taken as types of the whole.

Its national banks at a recent period showed capital and surplus \$1,571,281 and deposits \$3,901,053; State banks, capital and surplus \$203,527 and deposits \$1,673,832, while savings banks, capital and surplus \$1,270,481 and deposits \$7,747,236; total capital and surplus \$3,045,289, deposits \$13,322,121; grand total, \$16,367,410. To appreciate the full meaning of these figures it must be remembered that while Charleston has a population of about 60,000, more than half are negroes, so that there are probably not more than 25,000 whites.

The movement for the reclamation of swamp lands by drainage, now general over all those sections of the country in which there are large bodies of swamp lands, has been joined by the business men here, who are alive to the great enhancement of values to be realized from the draining of the thousands of acres of coastal plain lands in this State and lying tributary to this city. A meeting of delegates from the various communities throughout the State where interest was felt in the movement was held in this city a year or so ago, and the subject of reclaiming swamp lands was discussed from many standpoints. There was a reluctance, however, on the part of the men who composed the meeting to ask Government aid, and the movement seemed for a time to have died out. There is a feeling now that many of these lands can be profitably reclaimed by private enterprise—as indeed many acres have been reclaimed and made wonderfully profitable—and the organization of corporations for that purpose and to carry on large farming operations after the drainage has been done is among the probabilities of the near future. It is estimated that 400,000 acres of fertile lands can be reclaimed in the coast section of this State.

Charleston enjoys an excellent city government, presided over by Mayor Rhett, ably assisted by other young men in the City Council, bearers of names which, like his own, have been notably exalted in the history of the city and the Commonwealth. The municipal administration is not only kept free from graft, but it has taken a foremost place in movements that have for their object the upbuilding of the material interests of the city. The freight bureau, for instance, is a municipal institution, supported by taxation. A yearbook that sets forth annually the accomplishments of the city and the advantages it offers is compiled and published by the city government. The city fire department, conducted on the merit and service system, is so efficient that the ratio of fire loss in Charleston is smaller than in any other city in the country with one exception. This, of course, has a telling effect upon insurance rates.

As a place of residence Charleston offers allurements not surpassed by any other city. The schools and churches, the social patriotic societies, the graceful hospitality, the gentle courtesy that pervades even the business circles—these be the things that make for the finer life, and this is their natural abiding-place. GEO. BYRNE.



## \$500,000,000 for River and Harbor Improvement.

[Written for the Manufacturers' Record.]

Nearly two years ago, or on February 1, 1906, the MANUFACTURERS' RECORD, in an editorial reviewing the wonderful development of this country and pointing out the need of a broader policy for river and harbor improvements, said:

"Railroads and great industrial institutions feel justified in issuing bonds for extensions and improvements if they can see ahead of them a sufficient enlargement of business to safely earn the 5 or 6 per cent. annual interest upon the bonds, with a small sum added as a sinking fund, but here the American people, through the National Government, make 100 per cent. net profit a year in the direct saving in freight and many times that in the volume of business developed by these improvements, yet hesitate and halt over every dollar of new expenditure. If it were possible by the touch of some magic wand to bring about over night the completion of all the river and harbor work which has for years been projected and upon which the Government is annually spending a few paltry millions of dollars, it would be recognized that the annual saving to the country would far exceed the total cost of all the work. If the investment necessary to do this be \$500,000,000, the country would be benefited to a much greater extent in net earnings than this \$500,000,000, in addition to the tremendous expansion in every line of human activity which would follow as a natural result. Any directory of a great business corporation the stock of which was held by the public which failed to utilize an opportunity of this kind, and by the issuing of new securities provide capital for such a development, ought to be forced out of office at the very first moment the stockholders could get together as recreant to its responsibility and unworthy of public confidence. But the American people, able to do this work and do it immediately and reap the profits from it now, permit the management of their affairs as represented by Congress to potter along year after year, doling out a few meager dollars toward river and harbor improvements, and doing it in such a way that the full benefit cannot be realized in this generation, probably not even in the next generation. Moreover, in the present way the cost is far beyond what would be necessary if a broad, comprehensive plan were undertaken of doing the work at once. Great as may be the future value of the Panama canal, revolutionizing upon the world's trade as its effect may be, well worth when completed, if done within a reasonable time, the \$400,000,000 or \$500,000,000 which it will possibly cost, the worth of the Panama canal to the American people will not be so great as would be the fullest development of our vast river system, furnishing ample water transportation for the increasing traffic of the country. Such a development would not in any sense militate against the railroads. It is true that it might be a regulator of freight rates, and a far better regulator than Congress can ever be, but it would so vastly expand the trade and traffic of this country that our railroads would still continue, as they are at present, to be taxed beyond their ability to handle traffic. We would see throughout the country an expansion somewhat similar to that which has followed the development of the harbors and the Sault Ste. Marie canal on the lakes.

"Then why not let the American people demand the immediate issuance of low-interest-rate bonds to a sufficient extent, whether that be \$500,000,000 or more, to carry out as rapidly as the work can be judiciously handled the full improvement of the Mississippi and the Ohio and all their tributaries, the construction of the inland waterway connecting the Hudson river and the Gulf, the Chicago and Mississippi canal, the great works needed on the Pacific coast and on the rivers of the South, and all the other river and harbor work, the importance of which has been fully recognized by the National Government? Such a plan would be simply the doing by the people through their directory, the Congress of the United States, what any well-managed business corporation would do—the issuance of a sufficient amount of securities to carry out a development promising not merely 5 per cent. or 6 per cent. profit, but more than 100 per cent. annual profit to the country."

By many this suggestion for a very broad policy of river and harbor improvements was regarded as in advance of the country's needs. Even the leaders in this important work felt that if the country and Congress could be sufficiently aroused to the importance of the subject to insure an annual appropriation of \$50,000,000 this would be as much as could be hoped for. But within the last two years the sentiment in favor of the policy suggested by the MANUFACTURERS' RECORD has been rapidly growing. The people of all sections have been forced during the last two years to see that the prediction of the MANUFACTURERS' RECORD has been fulfilled in a practical breakdown of the railroad system of the country through its inability to promptly handle the traffic offered. Notwithstanding the present temporary lull in business the railroads are congested with freight; the grain shippers of the West find it impossible to get their wheat and corn to market except after weeks, and in some cases months, of delay. To a large extent this is true in other sections and of other classes of freight. It may be that this present lull will for a brief while so reduce the volume of traffic as to enable the railroads to catch up, but the indications are against it. Even if this should prove to be true, it would only show that we had to stop doing business because of the lack of proper transportation facilities. The estimate made two years ago by the MANUFACTURERS' RECORD that at least \$5,000,000,000 would be needed for the proper enlargement of the railroad facilities of the country to meet the conditions then existing, an estimate afterwards enlarged by Mr. James J. Hill to \$5,500,000,000, is now still further increased by Mr. Hill, who makes the statement that this amount would have to be increased by 50 per cent. to enable the railroads during the next five years to meet the conditions forced upon them by the tremendous growth of the country. As soon as the present wave of agitation against railroads and corporations has passed, just as similar waves in the past have done, money will again seek investment in railroads. But even if today it were possible for them to secure the \$7,000,000,000 or \$8,000,000,000 now estimated to be necessary to enable them to keep pace with the progress of their traffic it would be impossible for them to build new lines fast enough and buy rolling stock with sufficient rapidity to relieve the freight congestion, which is a tremendous economic handicap upon the further progress and prosperity of the country. Worse than friction in machinery, worse than the lost power that the engineers endeavor to overcome, is the tremendous friction, the lost power, in handling the business of the country, which, under present inadequate facilities, means a loss in the aggregate of hundreds of millions of dollars to the business interests of the whole country, and every section shares in this loss.

In the face of such conditions and of the tremendous amount that the railroads must spend, how puny seems the \$500,000,000 which the country has the right to ask the National Government to appropriate for the improvement of the rivers and harbors of our land that the strain upon our business interests by inadequate facilities may be somewhat lessened! Contrast this amount with the far vaster sums which have been spent by European Governments for water transportation; contrast it with the certainty of a net gain to the country annually greater than the total cost, and study it in the light of the far-reaching economic questions affecting the world's trade and our position in the world's commerce by reducing the cost of production and of the handling of freight to such a point as to enable us the better to meet competition in the world's markets.

While the MANUFACTURERS' RECORD is not an advocate of the doctrine of the Government undertaking great public works in order to create employment in times of dullness in trade, yet the conditions at present are such as to make this the most opportune time possible for the broadest kind of river and harbor work. The great contracting forces of the country, with their vast machinery or plant equipment, which for the last 10 years have been given to railroad construction and kindred work, are now to a considerable extent seeking new avenues for employment. The men engaged in such work are at present idle. Under these conditions it will be possible to carry out large river and harbor improvements more expeditiously and at a lower cost than at any time within the last 10 years, and while thus securing these advantages at the same time give employment to the millions of capital invested in construction plants and to the thousands of men who are at present idle by the dearth of railroad construction work. This is indeed the opportune hour, and we believe that the Rivers and Harbors Congress, now in session in Washington, which has wisely for several years been giving its effort to securing an annual appropriation of \$50,000,000, might take higher and broader grounds and ask of Congress the passage of a bill insuring the expenditure of \$500,000,000 if that amount be required, and to be raised by the sale of bonds if that be necessary, to carry out as rapidly as the work can be done every undertaking which has been passed upon by the army and navy engineers as feasible and desirable. There may, indeed, be great possibilities in water transportation improvements which have not yet received the commendation of the army engineers, and these, too, should have the very best consideration if, upon investigation, they show substantial merit. The country wants no niggardly policy. It recognizes that the railroads cannot take care of the increasing traffic of the country, and that our waterways must be looked to, and only through broad and quick action by Congress can the present situation be met.

In the MANUFACTURERS' RECORD of November 21, 1907, this subject was touched upon and the suggestion reiterated that at least \$500,000,000 should be expended in this work, and that, if necessary, bonds should be issued for that purpose. This editorial has called forth many interesting letters from men in public life as well as from leading business men, most of the letters heartily endorsing the suggestion. The letters follow:

Hon. C. S. Deneen, Governor of Illinois:

"There are many indications that an era of development and conservation of our natural resources is at hand, and, in my opinion, there is no direction in which this program can be carried with greater benefit than in the conservation and development of our internal waterways. The necessity for the improvement of our transportation facilities is evident, and in no way can this improvement be accomplished so readily or so cheaply as by the utilizing of our splendid system of domestic waterways."

Hon. Albert B. Cumming, Governor of Iowa:

"In a general way I am in concurrence with your view. I have been endeavoring for the last six years to stir up a public sentiment in our part of the country which will demand the improvement of our waterways. The first thing to be done is to adopt a plan, not for one river, but for every river and harbor of large importance in commerce and transportation. All work done thereafter should be carried on in pursuance of this plan, giving precedence in point of time to those waters whose improvement is most vital to the commerce of the country. Accompanying the plan there should be an estimate of the cost, so that the people could understand precisely what to expect. When these things are accomplished the work should go continuously forward without the hindrance and delay which will necessarily intervene if the amount to be expended in any one year is dependent upon the temper of Congress in the preceding year. I believe that the funds necessary for the work should be raised by an issue of bonds, to be sold from time to time as the expenditures require. It is not fair to burden the property and the business of the country during the few years that the improvements will be in construction with the entire expense."

Cyrus P. Walbridge, president J. S.

Merrell Drug Co., St. Louis, Mo.:

"I most cordially approve the views expressed in the editorial. If I were to criticize at all I should say that you place the bond issue too small. I have maintained for some time that provision should be made for a bond issue of \$1,000,000,000 for this purpose, the bonds to be sold as the money was needed for the work. I was present at a meeting of St. Louis business men about a year ago, when the resolution was passed requesting Congressman Bartholdt to introduce the bill providing for a bond issue of \$500,000,000, and at that time I expressed the opinion that the resolution should read \$1,000,000,000, but the more conservative thought prevailed. I believe that this question should now be taken up on lines so broad, so thorough and so big as to completely submerge all petty criticism and force the great thought of the country to give it attention."

United States Senator N. B. Scott of West Virginia:

"I am one of the original people who organized the Ohio River Improvement Society some years ago at Cincinnati and attended for the first three or four years their meetings regularly until they got well under way and had plenty of people to help them. I am certainly in favor of anything and everything that will develop our inland waterways, because by reason of their development the transportation of the country will be greatly benefited, railroads will not be congested as they now are, and I think it would also result in a material reduction of freight rates. Consequently, you may count me as being favorable to any measure that will in any way improve our inland waterways."

George Clinton of Clinton & Clinton, Buffalo, N. Y.:

"As a matter of public policy I have always been in favor of the adequate improvement of our inland waterways; indeed, I regard such improvement as absolutely necessary to increase and insure the

prosperity of our common country. I believe that local interests should not be weighed in the balance as against the general public interest. It follows that I personally favor the improvement of water connections between Raritan bay and the Delaware, the Delaware and Chesapeake bay between Norfolk and the North Carolina sounds, those sounds to Beaufort and the connections of waterways along the Southern coast, so as to give interior water communication from Florida to New York bay and thence to Boston by canal either through Cape Cod or through Massachusetts from Fall River. Nevertheless, the data on which to base a computation of the expense of these improvements and the extent of improvements, together with the data for the improvement of our other inland waterways, are so meagre and ill-digested that I am not prepared to approve any particular plan nor to advocate any particular amount of expenditures. I think we must regard the improvement of our waterways as a whole to be carefully investigated by competent men and await a perfected plan for improvement by the General Government. Such a plan cannot be long delayed, because the President's commission has been thoroughly investigating the interior waterways, and, I am informed by Senator Newlands, is about to take up the Atlantic coast route. This commission will undoubtedly recommend legislation that will put a stop to log-rolling in Congress, the frittering away of Government funds by making of disjointed improvements and by the appropriation of special and small amounts. The legislation will probably take the form of a plan to secure a fixed appropriation every year for improvements of waterways and harbors in accordance with a concerted general plan, and will be followed by proper surveys, estimates and detailed plans to be made by the War Department. By advocating particular plans too strenuously we may possibly interfere with the consummation which we so devoutly wish. However, I believe that agitation of broad schemes of improvement will have an excellent effect and certainly will have a tendency to draw the attention of the Government and the public to what is needed, so that all interests will be finally taken care of. For the reasons I have so crudely outlined I cannot at this time approve the annual expenditure of any given sum, but can only say that the annual expenditure should be large enough to insure economy and efficiency in work and to secure the improvement of our waterways and harbors as rapidly as may be commensurate with good work and compatible with the finances of the country."

Olin J. Stephens of New York, N. Y.:

"It seems to me that the intelligent development of our waterways can only be secured through the Government taking hold of them on a broad, liberal policy. Whether Congress will appropriate sufficient money to do this work I doubt very much. Another phase of the situation is the improvement by means of money realized by the sale of bonds. This would distribute the expense over a longer period of years, which would seem quite justified when it is considered that the benefits will accrue to later generations as well as the present. I wish to thank you for the interest you have taken in this subject, and I believe the country is beginning to realize its importance."

President W. W. Finley of the Southern Railway Co., Washington, D. C.:

"I have received your letter of the 22d instant, enclosing a reprint of your editorial advocating a bond issue to the amount of \$500,000,000 to provide funds for river and harbor improvements, and have read it with much interest. Holding, as I do, that the country is urgently in

need of more and better transportation facilities, I believe that the Federal Government should adopt a comprehensive plan for the improvement of the harbors and inland waterways of the United States and that this work should be carried forward as rapidly as it can be done advantageously. As waterways alone cannot solve the transportation problem, if the country is to enjoy the full benefit of improved waterways they must be supplemented by the most effective railway facilities than can be provided. I think it important, therefore, that railway improvement should go hand in hand with river and harbor improvement, and that the same enlightened public opinion which calls for the improvement of the waterways by the General Government should uphold the hands of those who are willing to invest their private means for the provision of improved rail transportation."

Gustav H. Schwab, North German Lloyd, New York, N. Y.:

"While I consider the extensive development of our water-transportation facilities to be a pressing necessity for the future growth of our country, I am not at present prepared to advocate any specific annual expenditure without more adequate knowledge as to the needs of the various sections of our country. The numerous propositions for waterway development that have been brought forward from time to time should, in my opinion, be submitted to the intelligent scrutiny of competent authority to decide upon their merits."

G. F. Milton, editor *Sentinel*, Knoxville, Tenn.:

"Since the Federal Government has entered upon a project of connecting the Atlantic and Pacific oceans across the Isthmus of Panama at an estimated cost of \$300,000,000, why should not the Government enter upon projects for the improvements of the internal waterways of the country, so that we shall have a great water-borne commerce for both local and foreign destinations, much of which should be contributed by the waterways of the Mississippi valley, be poured out into the Gulf and through the Isthmus for Oriental and South American trade, making of that isthmus really a second mouth of the Mississippi river? One-half of the commerce of Germany is borne on its rivers and canals. France has spent over a billion and a half dollars on waterways. In our own experience the immense returns for such improvements is shown by the Sault Ste. Marie canal. Yet our Government's annual expenditures for rivers and harbors has averaged only about \$4,000,000. There are indications of a final waking up on this vital subject, and I am glad your splendid publication is taking it up in such an intelligent manner."

Reuben Foster, president and general manager Chesapeake Steamship Co., Baltimore, Md.:

"My attention has recently been called to an editorial of the MANUFACTURERS' RECORD of November 21, 1907, in regard to the importance of river and harbor improvement. I heartily endorse the position therein taken by you, as I consider that this question of inland waterways from Massachusetts along the Atlantic seaboard to the Gulf, and thence via the Western rivers to the lakes, thus making a complete inland waterway connection, is one of great national importance and one which should be acted upon by the National Government."

Mr. J. A. Patten, St. Elmo, Tenn.:

"It seems to me important that our rivers and harbors should be made available for our commerce without unnecessary delay. If the Government cannot by direct appropriation supply the money to do that as rapidly as the work can be eco-

nomically completed, I favor putting it on the same basis as the Panama project and issuing bonds to pay for the same. Some observation of the European waterways this summer strengthens this opinion."

Congressman J. Hampton Moore of Philadelphia, Pa.:

"While I do not desire at this time to commit myself as a member of Congress to any specific proposition of this kind, I do desire, generally speaking, to be counted in favor of the best method of acquiring at the earliest possible day the objects described in your communication. The whole country is being aroused upon the subject of deeper waterways as a means of improving transportation and relieving congestion, and it is amazing, in view of our wonderful progress as a nation, that the waterway proposition has been allowed to slumber so long. We have just concluded in Philadelphia the Atlantic Deep-sea Waterways Conference, called for the purpose of discussing the importance of developing a continuous chain of inland waterways from Boston to Beaufort and beyond. The project itself is not new, but effort to bring together the various States interested is new, and has resulted in the formation of a permanent association to keep this important problem before the public until this great work of commercial and naval necessity is an accomplished fact. It is to be regretted that the waterways have been so long neglected and that we should now be so slow in availing ourselves of their great utility. We need them now, and need them badly, and it may be that a bond issue may be as fair a way to obtain them as any other. We should at least not be afraid to let posterity bear some of the expense of the magnificent heritage we propose to hand over."

Charles E. Hellier, attorney-at-law, Boston, Mass.:

"Replying to your letter relative to the subject of a \$500,000,000 bond issue for waterways improvements, I beg to say that you are performing a valuable public service in bringing this matter to the attention of the American people. The prosperity of the country cannot go on without adequate and increased transportation facilities, and the general public are so interested in commercial and manufacturing enterprises that they are using their available capital in those directions where they command a rate of interest higher than the railroads are willing to pay on their bonds and other securities. It is, therefore, practically impossible for the railroads to float the necessary securities to furnish the additional facilities which the growth of the country demands. Moreover, it is also true that water-borne freights can be carried cheaper than railroads can carry the same freights, and in Europe a large proportion of the heavy traffic is carried on waterways built at the public expense. A carefully planned and properly built system of waterways in the United States along the Atlantic seaboard and connecting the Great Lakes with the Mississippi river system would be of incalculable value to the country and will be demanded as soon as public opinion is educated up to the advantages which would be derived from such improvements. The MANUFACTURERS' RECORD is now so widely circulated and extensively quoted that it is one of the leading influences in creating public opinion, and it will be continuing its policy of upbuilding the business interests of the country in advocating the building of waterway improvements."

John L. Vance, president Ohio Valley Improvement Association, Columbus, Ohio:

"I have heretofore expressed myself in the strongest terms possible to the effect that the Government should expend not

less than \$50,000,000 per year for the improvement of the rivers and harbors of the country. It would be far better if a greater sum than this could be spent annually. If the revenues of the Government would permit the expenditure of the money necessary to speedily and permanently improve the waterways of the country, there would be no necessity for issuing bonds. If, however, the revenues are not sufficient, I most heartily favor the immediate issue of bonds to provide all the money needed for this, the most important work now receiving the attention of the country."

B. S. Pope of Lewis Pope & Sons, Parkersburg, W. Va.:

"I have your letter, also editorial as to waterways, and certainly very heartily endorse your editorial, and think it would be the very thing to do at this time could such a pressure be brought to bear on the United States Congress to make such an appropriation as you suggest in your editorial and improve the navigable streams at once."

Baron von Sternburg, German Ambassador to the United States, Washington, D. C.:

"I am sorry to say that I cannot express my opinion with regard to waterways in the United States, but I can state that the development of waterways and canals in Germany, especially the work accomplished under the direction of Emperor William II, has proved a great boon to commerce and to industry."

Thomas Wilkinson, president Upper Mississippi River Improvement Association, Burlington, Iowa:

"The editorial published in the MANUFACTURERS' RECORD, issue of the 21st instant, has afforded me very great pleasure. It sounds the keynote of the present-day requirements of this country. It is impossible within the limits of a letter to do justice to the merits of this absorbing subject. Therefore I will merely say that there has never been a time when public interest was so much aroused to the importance of the nation's waterways as now. With this intense interest, born of education and necessity, comes a vigorous and urgent demand for a rapid and systematic improvement of rivers and harbors, so they can be used to their full capacity to aid in transportation of the increasing commerce of the people, which has far outgrown the ability of the railroads to handle it. There never was a more opportune time for the Government to inaugurate a broad, comprehensive and liberal policy of river and harbor improvement, one that would be in keeping with the wealth and dignity of the United States. The commerce of the country requires the use of all of the rivers and harbors. Why should they not be improved and made available as rapidly as possible, even though it may require the expenditure of \$50,000,000 or \$100,000,000 or more annually until completed in the shortest possible time? To carry out such a liberal and comprehensive policy I am heartily in favor of the Government issuing bonds to raise the necessary funds so that present and future generations may enjoy the fruits thereof and let posterity help to pay the cost."

William J. Oliver, Knoxville, Tenn.:

"I consider the present the most opportune time for the agitation of river and harbor improvements, and think your idea about bringing this matter before the public a good one. I heartily approve of same."

Hon. Charles Scott, Rosedale, Miss.:

"I am now and always have been in favor of liberal appropriations for the betterment of our rivers and harbors. I note with pleasure, therefore, that this sentiment is becoming general throughout the



country, and trust that the next Congress will appropriate not less than \$50,000,000 a year for this important purpose. I cannot say, however, that I think that at this time the Government should issue bonds as you suggest. I think that as soon as confidence is restored and our crops are marketed there should be more than ample funds in the treasury for this and all other legitimate expenditures. People in the Mississippi valley thoroughly appreciate the zealous and valuable work that you have rendered in this behalf, and a great many of them will perhaps agree with your suggestions as to the propriety of the bond issue."

Wm. F. Saunders, secretary Lakes-to-the-Gulf Deep Waterway Association, St. Louis, Mo.:

"Last December the organizers in St. Louis of the Lakes-to-the-Gulf Deep Waterway Association, who are all members of the Business Men's League, bankers, manufacturers and jobbers, every one of them a substantial business man, met at the St. Louis Club to give a dinner to Congressman Richard Bartholdt of St. Louis, and at that dinner requested formally that Mr. Bartholdt should introduce a bill providing for a bond issue of \$500,000,000 to be spent on the improvement of rivers and harbors. The president of this association, Mr. W. K. Kavanaugh, presided at the dinner. Mr. Bartholdt introduced this bill within two weeks afterwards in the House of Representatives. Of course, it did not pass at that session. Mr. Bartholdt intends to reintroduce this bill in the Sixtieth Congress. Before it had been brought to our attention that the MANUFACTURERS' RECORD had taken such strong ground in favor of the bill we had believed that all we could do at this session of Congress was to educate the people so that a strong sentiment might be created in favor of the bill and possibly it might be passed at the next session of Congress; but if the MANUFACTURERS' RECORD is going to throw the weight of its influence on the side of the bill we may have strong hope that it will pass at this session."

A. H. Devers of Closset & Devers, Portland, Ore.:

"Concerning a five-hundred-million-dollar bond issue for waterways improvements, just received, your suggestions in this matter meet with my entire and unqualified approval. The indebtedness of the United States is extremely small. In many ways it would be a good thing to have a larger bond issue. There is no purpose for which bonds could be issued which would prove of such enormous and immediate benefits as the rapid and thorough improvement of the rivers and harbors of the country. Even today, when business has fallen off so enormously, it is an utter impossibility in this northwest section of the country to get one-third enough cars to handle the wheat crop, and this condition exists in spite of the fact that lumber shipments have fallen off to one-third of what they were three months ago. I do not wish to tire you with reasons why the improvement of the rivers and harbors would prove a splendid investment, but we have the example before us of the wonderful success of Germany particularly and other continental European countries that have made such rapid strides on account of the improvement of their waterways. This matter demands continuous work, and I am glad to see that the MANUFACTURERS' RECORD has taken up the work, and hope that you will consistently and determinedly hammer away at it."

Congressman Richard Bartholdt of Missouri:

"I am happy to say that in the course of the last session of Congress it became

evident to me that no headway could be made with respect to these improvements, especially the great national projects, unless a bond issue was authorized for such purpose. Pursuant to this conviction, I drafted and introduced a bill which I believe thoroughly covers your own wise suggestions as well as my ideas on the subject. If on the eve of a presidential election we should not succeed with this matter, we are nevertheless bringing the question to the attention of the country, and sooner or later this bond issue will and must be made. Acting on this conviction, I shall on the first day of the session reintroduce this bill."

Albert Bettinger, attorney-at-law, Cincinnati, Ohio:

"With reference to a bond issue by the Government of \$500,000,000 for the more rapid prosecution and completion of river and harbor improvements, I have to say that I am most heartily in favor of such action. Serious consideration of the question for two years past has served to strengthen the view that a bond issue ought to be resorted to by the Government for these improvements. No good reason has yet been pointed out why these improvements should be differently treated than the Panama canal. The Government is losing millions of dollars and the general public much more by the desultory prosecution of these important public works. I could give my reasons for these views at length, but you understand them quite as well, if not better, than I do."

Congressman Joseph E. Ransdell, president National Rivers and Harbors Congress:

"I have read with much interest your article on the bond issue. That question is going to be discussed before our congress, and will receive considerable attention from it, in my judgment."

J. Bascom Mercer of the Mercer & Evans Company, Wilmington, N. C.:

"Now that the whole country seems to have been awakened to the necessity and importance of an inland waterway or ship canal from across Cape Cod to the Gulf of Mexico, as well as the improvement of rivers and harbors by State appropriations and by the General Government, the press all over this great country should lose no opportunity to urge and press this matter upon the Congress so soon to meet. Some of our representatives have done noble work in this great movement, notably among them the Hon. John H. Small, M. C., from the first North Carolina district, and their valuable services should be recognized by the press of our whole country, as well as by their constituency, who should see to it that they retain their seats in Congress. The improving of rivers and harbors at the earliest possible time by the Government; issuing bonds, if necessary, to insure its quick accomplishment, is most certainly the remedy for the relief of the congested railroad traffic if this wonderful development is to continue in our now prosperous country, and this great inland ship canal above mentioned would be worth the millions it cost to construct it in the event of war or in preserving the peace with the nations who might otherwise think of warring against us, to say nothing of the millions of tons of heavy freight that would naturally find its way over the bosom of its waters in almost every kind of floating craft. We do not think, when the engineers should complete a survey for this route of this proposed canal, if the coast line is closely followed, thereby using tidewater and avoiding the necessity of locks and costly dams, and with the improved and up-to-date methods of dredging in soft material, that it would cost near so much as one would ordinarily suppose, because of the fact that there are so many creeks and sounds along such a

route that could be easily straightened and deepened to the required dimensions.

"Our city (Wilmington) and the surrounding section, yea, the whole State, have awakened and been thoroughly aroused to the importance of securing appropriations by the Government sufficient to have a 30-foot channel in the Cape Fear river from Wilmington to the ocean, a distance of 28 miles, thereby assuring a gateway at this important point in our State, besides looking to the deepening of this important stream above Wilmington to Fayetteville, N. C., as well as other smaller streams flowing into the Cape Fear. Some zealous and effectual work has been done recently and is still being done looking to the accomplishment of this great possible necessity. 'Let us pray and work.'"

John Barrett, Director International Bureau of American Republics, Washington, D. C.:

"I have read with interest your editorial on a bond issue for the improvement of our interior waterways. While I have not yet had time to study carefully the details of your plan, I beg to say that I stand strongly in favor of a systematic effort on the part of the United States, through established appropriations or a bond issue, to improve the rivers and harbors of this country. When I see what the less powerful, less rich and less populous countries of South America are doing in comparison with what the United States has done, I feel as if we were very backward. The Government of Brazil, with only 20,000,000 of people, is today spending more money for the improvement of rivers than is the United States, while Argentina and Chile are carrying out ambitious works. It will be folly for us to spend \$500,000,000—which will be required to build the Panama canal—without spending a corresponding amount on the deepening of our rivers and the improvement of our harbors so that they will be able to take care of the shipping which is necessary for the United States to get its share of the trade of the Panama canal. All Latin America is taking great interest in the construction of the canal, but it is interesting to note that the newspapers of that part of the world frequently refer to the poor condition of the rivers and harbors of the United States compared with those of Latin America."

M. J. Sanders, New Orleans, La.:

"I have for many years past earnestly advocated the general improvement of all such waterways in the United States as could be reasonably shown would, by their service as transportation carriers, justify the expenditure necessary to make them available as such. I hold these views more strongly today than ever, because in addition to the natural economy of efficient water transportation for a mass of bulky, cheap products, and further, the bearing that such available waterways have upon freight rates generally, there is today indisputable evidence of the fact that our railroads cannot satisfactorily cope with the immense development which this country has experienced in the past few years. I hope that even if satisfactory water transportation were no more economical than that of railroads or other methods of transportation, it is essential, as a matter of wise public policy, to so develop our waterways as to provide an efficient system of national transportation roadbeds which shall be available without tax or private control to the public at large. Even if other means of transportation were ample to take care of our commerce today, the necessity of national roadbeds for transportation purposes still exists. But with a seriously threatened commercial depression, by reason of the inadequacy of transportation facilities,

there is today an imperative necessity for the adoption of a comprehensive and thoroughly efficient policy of waterway improvements, which should receive immediate consideration. To this end it is, in my opinion, essential that the adoption of such a policy and its promulgation should no longer depend upon such funds as may be found available by Congress, after providing for other established necessities, but there should be a special ample fund, available as required, and capable of further development, such as can only be obtained satisfactorily through a special issue of Government bonds. I believe, therefore, that an act providing for the issue of Government bonds for rivers and harbors improvements should be brought before Congress at its next session and earnestly considered and pushed to adoption at the earliest date."

W. A. Patton, Catlettsburg, Ky.:

"In reply to your request for my opinion as to the advisability of the Government making a bond issue aggregating \$500,000,000 to provide funds for inland waterway improvements, which has met the approval of the army engineers, I would state that for more than 12 years I have given this subject serious consideration, and the result of my deliberations is that this is the proper step for the Government to take. That this Government, blessed with the grandest rivers on earth and with transportation facilities totally inadequate to our growing demands, should be so far behind so many other nations of so much less importance in work of this kind plainly shows that our past methods of niggardly appropriation in this line are not the kind to place us in the position we ought to occupy among the nations of the earth. That the slow manner in which the work progressed on the construction work in the past is not in accordance with good business judgment, and should be modified by the provision of funds adequate to rapidly complete all that has been contemplated. That the rapidly-increasing population of the country is polluting the rivers with sewage, and that the grandest process known to science for the purification of a stream is by aeration, and that the construction of dams whereby the water falling over the same purifies the water of a river as can be accomplished in no other manner, if from no other than a sanitary point of view where the health of the nation is at stake, would amply justify the Government in the undertaking."

John M. Stahl, Chicago, Ill., former president Farmers' National Congress:

"I am most heartily in favor of the most liberal appropriations for the comprehensive, rational, systematic and rapid development of water transportation in the United States."

#### Columbus Power Co.

It is understood that the Columbus Power Co. of Columbus, Ga., is completing the surveys of its various water-power properties on the Chattahoochee river between Columbus and West Point, Ga., preparatory to further developments. It is preparing to build in the future a third water-power-electrical plant to transmit electricity for power and lighting. The various properties surveyed are said to be capable of furnishing 125,000 horse-power, and that at one point on the river possibly an 80-foot dam will be constructed. The company's two present plants are furnishing 80,000 horse-power. Messrs. Stone & Webster, 84 State street, Boston, Mass., are general managers of the company, and F. E. Reidhead is manager at Columbus. Plans for the developments of the properties were mentioned by the MANUFACTURERS' RECORD some months ago.

## REINFORCED CONCRETE FOR TEXTILE MILLS.

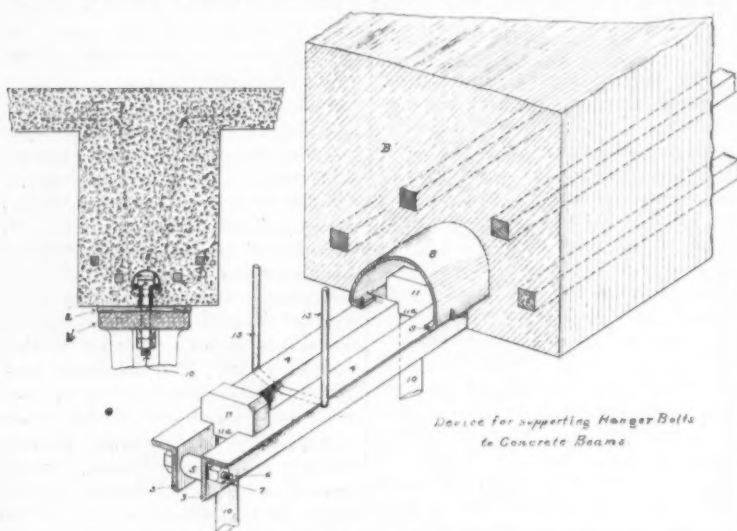
By A. FRANCIS WALKER.

[Written for the Manufacturers' Record.]

With the rapid adoption of reinforced concrete for factory and warehouse buildings and the almost unquestionable superiority of this construction to any other for these purposes, it is somewhat surprising that textile millowners are using it to less extent than other manufacturers in their new plants. Probably one reason is due to the fact that the "Mutuals" and Factory Insurance Association have made much lower rates to textile mills than that obtained by other risks, and until recently

however, it is dependent on the size and height of the building, the larger and taller this is and the greater the expense on the foundations, the lower is the cost of concrete to that of brick and timber. In an average location in the Southern States a concrete mill of four or more stories will cost about the same as the slow-burning type of good construction. A mill of two stories will cost about 10 per cent. more.

It is sometimes asked if a concrete mill will resist the vibrations due to high-speed



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they have made no reduction in favor of reinforced concrete over that of "standard mill construction." The writer is informed that the F. I. A. companies now offer a reduction of 20 per cent. in favor of the former construction, but the rate on the latter (one-eighth of 1 per cent.) is so low that the greater inducement, as far as fire risk is concerned, lies in the added security of the fireproof building. Insurance indemnity does not protect from loss of business and profits, and a serious fire may occur in one structure that is a practical impossibility in the other.

There is still much ignorance on the part of the general public of the use and possibilities of concrete reinforced with steel rods. One hears the question frequently asked if reinforced concrete is "cheaper than brick," indicating that these parties think it only suitable for walls or foundations, and are ignorant of its use for columns, beams and floors. When informed of its use for replacing timber and steel construction the remark is often made that they are willing to "let others do the experimenting." The only remedy for this frame of mind is increased information of the subject, and if these people will investigate a very little and see a few of the many fine buildings that have been erected entirely of concrete they will quite likely change their views.

I have found that most manufacturers with whom I have discussed this subject are following with great interest the increasing use of reinforced concrete for factory construction, and that they are anxious for more information in regard to it. It is the object of this paper to give such information as generally sought and answer some objections made to its use in especial reference to textile mills.

The most common question is in regard to its cost—if it is dearer or cheaper than "standard mill construction." The relative cost naturally varies with local conditions, depending on the price of brick, timber and skilled labor, to that of gravel, cement and common labor. Principally,

machinery, and if these will not soon destroy its strength. In reply it may be said that reinforced concrete is superior to all other types of construction in this respect, for the reason that the entire structure is monolithic and without joints in walls, columns, beams or floors. Each part of the building is joined to the adjacent part by steel rods embedded in concrete while in the plastic state, and it can be compared to one molded in a gigantic foundry and cast from one heat with molten iron. It is not unusual to find machinery operated on the upper floors of concrete buildings with perfect satisfaction that would require a special foundation in the basement of any other structure.

It may be frequently observed in mills of brick and timber that the floors are lower at the walls than at the columns, because of shrinkage of the joints in the brickwork. In a concrete building the shrinkage is alike in columns and walls, and the floors remain level. Also timber beams have much more deflection, or sag more between the supports, than is the case with concrete beams, in which this is hardly perceptible. Good adjustment is necessary to the easy running condition of textile machinery, and when this is once leveled and adjusted in a concrete mill it remains so, and is not disturbed by settlement in the walls, sagging of the beams or vibrations in the floors.

Reinforced concrete may be designed to give much larger windows than are possible with brick walls in the "standard mill," because of the greater strength and character of the construction, which permits of narrower wall piers. The amount of additional light so obtained may be 30 per cent. or more.

Most millowners will object to a cement floor surface, such as is used in many buildings, and I agree with them. This is by no means a necessity, and he would advocate that the cement floor slab be overlaid with 1½-inch or heavier planking and covered with a top floor of maple. Sufficient body of wood is thus obtained for

fastening the machinery, and it is protected in case of a fire by the floor slab underneath. It would then only be possible to ignite it under unusual conditions.

Cement floor surfaces, when properly put down, prove satisfactory for certain kinds of work, and the machinery may be fastened to the floor with expansion bolts without trouble.

The most serious objection urged to a concrete mill is the difficulty experienced in providing an adequate and satisfactory method of supporting the shafting from the concrete beams. It is essential that the location of the shafting lines is not limited to a prearranged shafting plan, but that it be possible to attach the shafting hangers at any point, as may be done in the case of timber beams.

A method recently patented by me has been used and proved very satisfactory. It is illustrated herewith, showing the device in cross-section and perspective, and may be explained as follows: The two steel angles (4-4) are bolted together at three or more points with separators (5) and bolts (6), so as to give a uniform space between the vertical members, of seven-eighths inch or more. The angles are covered with a sheet-metal cap (8) attached to the horizontal members as shown at (9). This device is centered on the bottom plank of the beam mold, held in place by blocks nailed between the angles and embedded in the beam when it is cast. On the removal of the centers a narrow slot shows at the center of the bottom, running the full length of the beam. This device is held to the beam by the tensile strength of the enclosing concrete, and additionally by steel anchors (13) spaced about three feet apart, which also serve for vertical shear reinforcement.

The hanger bolts shown at (10) have winged heads (11) and square necks (11a), the narrow diameter of these being the same as the bolt and slightly less than the space between the angles. The bolts are inserted by turning the elongated heads parallel with the slot, and as there

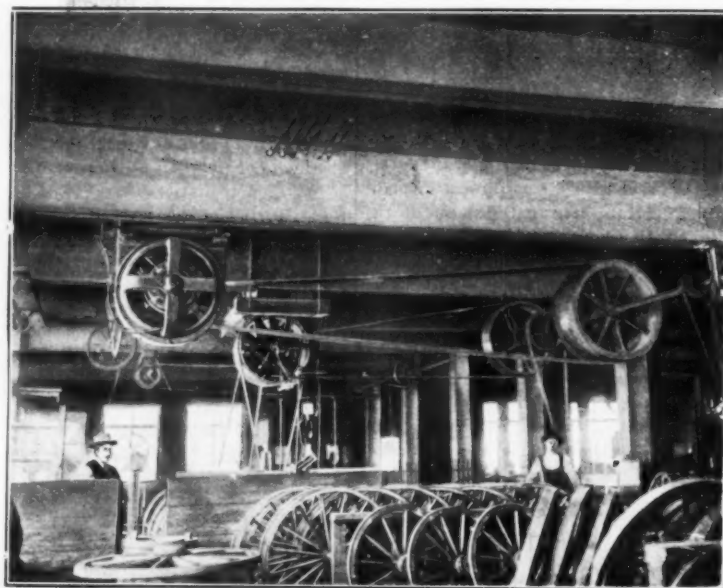
The angles used in this case were rather light, being only 1½x1½x¼ inches in size, and weighing one pound to the foot. A deeper and heavier angle is to be preferred for several reasons, but these were tested with 6000 pounds to each hanger bolt without showing any weakness. It may be added that this shafting was erected much more easily than could have been the case with timber beams.

It is interesting to state that in the above-mentioned building the first story was occupied before the one above was completed without serious inconvenience to the operation of the plant. It is also interesting to add that the temperature in this building during the hot days of the past summer was lower than in the adjoining building built of "standard mill construction." The width, height of ceiling, spacing and size of windows was alike in each building. The exact difference of temperature was not measured, but was very apparent to anyone passing from one building to the other.

In respect to permanence it may be said there is no limit to the life of a properly-constructed reinforced-concrete building. The floors, windows and roof covering may require repairs or renewals from time to time, but the concrete becomes harder with age and the steel will not rust when encased in concrete.

In conclusion, I would say that the progressive manufacturer who contemplates increasing his plant or building a new one will do well to carefully consider reinforced concrete, unless he is building for temporary uses or regards cheapness of first cost the main consideration.

The Chesapeake Steamship Co. announces that on and after November 30 the daily service on the York River Line between Baltimore, Md., West Point and Richmond, Va., will be discontinued, and steamers will be operated leaving Baltimore on Tuesdays, Thursdays and Saturdays at 5 P. M., and leaving West Point, Va., on Mondays, Wednesdays and Fri-



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is sufficient space under the cap for both head and neck, the bolts may be turned, and the projecting wings of the head seated on the upper sides of the angles. The square neck of the bolt, lying between the vertical sides, prevents it from turning.

It is desirable to use a three-eighths-inch wood strip or something similar as a cushion between the concrete beam and the hanger base, as shown at (1) and (2).

Another illustration is an interior view of the White Hickory Wagon Manufacturing Co.'s plant near Atlanta, Ga., in which this method was used to support the shafting and which proved very satisfactory.

days at 5.50 P. M. The landing at Yorktown will be discontinued.

The Atlanta section of the American Institute of Electrical Engineers has elected Messrs. John H. Finney, chairman; M. E. Bonyun, vice-chairman; George J. Yundt, secretary; S. A. Redding, J. R. Gordon and A. M. Schoen, managers.

The Chamber of Commerce of Columbia, S. C., has elected Messrs. B. F. Taylor, president; J. A. Hoyt, L. B. Dozier and Christie Benet, vice-presidents; C. W. Moorman, secretary, and J. H. Love, treasurer.



## MINERAL RESOURCES OF OKLAHOMA—I.

By CHARLES N. GOULD,

Professor of Geology at Oklahoma State University, Norman, Okla.

[Written for the Manufacturers' Record.]

It is only within the past few years that anyone has had any adequate conception of the vast undeveloped mineral wealth of the new State of Oklahoma. It is not now possible to correctly estimate the resources of the State for the reason that very little systematic work on the subject has been done. The information already secured has been gathered in a desultory way.

Notwithstanding the fact that practically no consecutive work has been done on the natural resources of the State, enough is known to justify the statement that no State in the Union has a greater variety of valuable minerals than has Oklahoma. The new State has practically inexhaustible quantities of nine important minerals, besides considerable amounts of a number of others. These nine minerals are coal, oil, gas, asphalt, salt, gypsum, stone of all kinds, clay of all kinds and sand. In addition to these, Oklahoma has considerable amounts of lead, zinc and iron; also some copper, gold and silver. There are also known deposits of such rare substances as tripoli, novaculite, volcanic ash, phosphate rock and the radium earths. Much remains to be done in the way of prospecting, and it is altogether probable that in time minerals will be discovered the presence of which is not now suspected.

The amount of coal in the new State can as yet only be estimated. In the Choctaw Nation, according to the estimates of the United States Geological Survey, there are available 2,954,138,000 tons of coal which have been segregated or set apart for the benefit of the Indians. A conservative estimate would indicate that this is not one-half of the available coal in Oklahoma. There is probably as much coal in the Creek and Cherokee nations as in the Choctaw Nation. It is safe to say that two-thirds of the coal in Oklahoma is on land which has been allotted to individual citizens, and much of it can now be purchased. More than 100 mines are in active operation, the output aggregating over 3,000,000 tons annually. The coal is chiefly a high-grade bituminous coal, and the output supplies a considerable part of the Southern Great Plains.

The development of the Oklahoma oil and gas fields is yet in its infancy. The greater part of the oil and gas so far found occurs along three lines which extend north and south. Each of these fields is coincident with a conspicuous anticline fold. So far as known, all the oil and gas obtained in Oklahoma occurs in regions of anticline folding. The easternmost of the three productive areas, known as Coody's Bluff-Alluwe field, lies along the Verdigris river, in the northern part of the Cherokee Nation. The oil is here found at a depth of 500 to 600 feet.

The second line of development is near the 96th meridian, extending from the Kansas line south for a distance of more than 75 miles. Along this line occur oil fields at Copan, Dewey, Bartlesville, Ramona, Skiatook, Tulsa, Red Fork and the now famous Glenn pool, from which 12,000,000 barrels of oil have been produced in less than two years. The oil along this line is found at depths of from 1200 to 1700 feet.

The third important oil-producing region is at Cleveland, Pawnee county, where oil comes from a depth of 1700 feet. It is quite probable that the Cleveland region is yet but partly developed, and that deep drilling in a region southwest of the present field will reveal the presence of considerable quantities of oil. Besides

these there are scattered fields which show great promise for future development located near Muskogee, Coweta, Morris and Wewoka. Small quantities of oil and gas have also been found at Wheeler, south of the Arbuckle mountains, and at Gotebo, north of the Wichita mountains.

Many new wells are being drilled in various parts of the field. Two pipe lines are now practically completed to the Gulf. These, in addition to the line now in operation to the Atlantic coast, will give ready access to the oil and assure a profitable market.

The amount of gas in Oklahoma is unknown, but from all available data it seems practically inexhaustible. Hundreds of wells flowing anywhere from 1,000,000 to 10,000,000 cubic feet a day have been shut in, and many wells are reported to flow 40,000,000 and even 60,000,000 feet daily. Large areas of known productive territory have not yet been drilled because there is no market for the fuel.

A noted American geologist, a man who is a recognized authority on the geology of oil and gas, who recently visited Oklahoma on a tour of investigation, gave it as his opinion that at the present time not one-fifth of the future oil territory has been prospected, and not one-fiftieth developed. It was his idea that the Oklahoma oil fields represented the largest undeveloped field in the United States, if not in the world.

The deposits of rock asphalt in Oklahoma are, so far as known, the most extensive in the United States. Asphalt is found in many parts of the new State, but chiefly in the region south of the Arbuckle mountains. It occurs along fault lines or fissures, which extend from the surface to an unknown depth. The rocks along either side of the fissure for a distance of 10 to 50 feet are permeated with a semi-liquid asphalt. When it is understood that there are hundreds of these fissures or veins already discovered, some of which are miles in length and of unknown depth, it will be seen that for all practical purposes the supply of asphalt is inexhaustible. New veins are constantly being brought to light, and no man can say how many will eventually be found.

There are in Western Oklahoma seven regions of salt springs, from which flow salt water so strong that 100 parts of the brine will make 40 parts of salt. It has been estimated that the water flowing from these springs is sufficient to manufacture 100 carloads of salt per day. At the present time none of this material is utilized.

Gypsum is found in every county in Western Oklahoma. According to a report submitted four years ago by the Oklahoma Geological Survey, it was estimated that the amount of material in the State would approximate 123,800,000,000 tons. This is enough to keep 100 plaster mills, each manufacturing 100 tons a day, busy for 34,000 years. There are eight plaster mills in operation at the present time, but no data as to the amount of material manufactured are available.

Building stone of practically all kinds is found in great abundance in Oklahoma. Granite of very superior quality is found in inexhaustible quantities in the Wichita and Arbuckle mountains. It is being quarried at Granite and Tishomingo. Gabbro, a fine black ornamental stone, occurs in the Wichita mountains, and porphyry in the Wichita and Arbuckle mountains. Limestone occurs in six widely-scattered parts of Oklahoma. Marble is found in

several places. Sandstone is present in every county, and near practically every town. At the present very little of this stone is being utilized.

Various kinds of clay are present in all parts of Oklahoma. Throughout the western part of the State there is a large amount of red clay shale, which is utilized for making pressed brick. In Eastern Oklahoma there is a variety of clay suitable for the manufacture of drain tile, terra-cotta, pottery, hollowware and other products. Large deposits of fire-clay occur in the coal regions, and good kaolin is reported from the Wichita mountains. Shale from various regions where limestone is abundant is suitable for the manufacture of Portland cement. These clay products, taken in connection with the immense deposits of coal and natural gas, render it certain that within a few years manufacturing interests of considerable magnitude will be instituted.

There is no part in Oklahoma where sand does not occur. It is everywhere sufficient for local demands. In several localities large deposits of fine glass sand have been recently discovered near natural gas. The value of this discovery will be understood when it is remembered that the glass factories in Southern Kansas and Northern Oklahoma obtain their sand from Illinois and Iowa, it being cheaper to transport the sand to the fuel than to bring the fuel to the sand.

The approximate amount of lead and zinc in the new State is not known, but taking into account the geological structure of the rocks and the known deposits, there is no reason for doubting that it will eventually be found that the amount in this State is as great as in Missouri or Arkansas. The greater part of the country east of the Grand river and north of Tahlequah is known to contain lead and zinc, but only systematic prospecting will reveal the amount. These minerals are also reported from the Arbuckle mountains.

Iron is found in small quantities in several places. A high-grade manganese iron ore has been discovered in the Arbuckle mountains, and deposits of hematite and siderite of considerable magnitude are reported near McAlester. Copper occurs widely scattered, but in small amounts. Traces of gold and silver occur in the Wichita and Arbuckle mountains, but there is little reason for believing that either of these minerals will ever be found in paying quantities. Novaculite, or razor-hone rock, occurs in the Ouachita mountains. Tripoli is found near the Missouri line. Volcanic ash is reported from Western Oklahoma.

With all this array of valuable minerals Oklahoma is as yet manufacturing very little of her raw material. A few gypsum plaster mills and a half dozen pressed-brick plants include all about now being done. Much of the gypsum plaster used in Oklahoma, however, comes from Texas, and the greater part of the pressed brick now going into her buildings comes from Kansas. With deposits of Portland cement material that never can be exhausted, and fuel sufficient to manufacture it, all the Portland cement used is shipped from other States. Cement plants are, however, under construction at Tulsa, Dewey and Ada. With limestones sufficient to manufacture lime for all the world, Oklahoma obtains practically all her lime from Missouri and Arkansas. Practically all the clay products come from Missouri and Kansas, notwithstanding the fact that Oklahoma has better clay than either State located in regions where fuel is abundant and cheap. With salt water going to waste and contaminating the streams, salt is imported from Kansas and Michigan. With asphalt deposits the larg-

est in the country, the streets of the larger cities are being paved with Trinidad asphalt. With glass sand in inexhaustible quantities, the glass factories are using Illinois sand.

Oklahoma has at the present time a population of approximately 1,500,000 people. Within the past few years there have probably been more buildings erected in Oklahoma and the Indian Territory than in any equal area of the United States. With the advent of Statehood the population will increase immensely and a much larger number of buildings be erected. It is therefore a matter to be greatly deplored that with the immense amount of building material available more of it is not being utilized.

This unfortunate condition of affairs is due largely to the fact that the presence and location of these various minerals have not been generally known. Another thing has been the difficulty in securing satisfactory titles to much of the land. With the coming of Statehood and the inauguration of satisfactory legal conditions most of these difficulties will be removed. As soon as manufacturers are advised of these various products new industries will be established and the abundant raw material will be utilized. Oklahoma is destined to become one of the leading manufacturing States in the South.

### Kentucky Oil Fields.

[Special Cor. Manufacturers' Record.]

Barbourville, Ky., November 30.

Last week a number of large strikes were made in lower Kentucky, two producers of 100 barrels capacity each being drilled in Wayne county. Both wells were removed from the producing area as previously defined, and the territory opened for operations is several miles ahead of production. Wright & Co. and Work & Turner, the respective drillers of the gushing wells, are now erecting rigs for new ventures, while other companies holding leases in that part of the field are beginning to sit up and take notice.

Some new capital has entered the Whiteley county field. The Cumberland Natural Gas Co., Barbourville, Ky., is erecting rigs in the upper section of the county for some deep test wells. This company has just concluded some deep drilling in Knox county. In the Bath county field Kentucky operators are erecting new rigs for some test work outside the developed area, and the success which has already attended this work will stimulate further searches for oil during the winter. The Union Oil & Development Co. is a new concern in Union county, where the prospects are just beginning to attract operators. The Airline Oil Co. is a new concern in Barren county.

The nine established fields of Kentucky present a good record so far this month, having turned out 19 strikes in the aggregate, with few dry holes. There are now close to 40 rigs up and in operation in the various districts.

One discouraging feature of the past week was a sharp decline in crude oil prices. The Standard Oil Co. and the Indian Refining Co., purchasers of the better grade of Kentucky crude oil, cut the price 10 cents per barrel, making the prevailing quotations \$1 and \$1.03 per barrel, respectively. This is a total decline of 20 cents per barrel this month. The immediate effect will be to curtail operations in the smaller fields, where little new territory is in sight. In the districts in which new territory has been opened and the chances of getting good producers are enhanced the reduction in prices will not affect new work to any great extent. The inferior grade of oil was not lowered, remaining at 75 cents per barrel, the quotations which have prevailed for a year past. W. S. HUDSON.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### BOUGHT A RAILROAD.

**Chas. D. Haines of New York Will Extend a Line Running Out of New Orleans.**

Charles D. Haines of Haines Bros., New York, is reported in a dispatch from New Orleans as announcing that he has purchased control of the New Orleans, Fort Jackson & Grand Isle Railroad, which extends from Algiers, on the opposite side of the Mississippi river from New Orleans, to Buras, La., 60 miles. He is furthermore quoted as saying that steps will be taken immediately to build an extension to Grand Isle, about 25 miles. The service on the line will be improved. Mr. Haines recently purchased control of the Lake Borgne canal, which is to be used in connection with the recently-announced plan of the Birmingham & Gulf Railway & Navigation Co. for shipping coal to New Orleans. The purchased road is of standard gauge, with seven locomotives and 144 cars.

Mr. Haines is also reported as saying that in the deal he represented only his firm and associated interests, and that no other railroad is concerned in the transaction. He also said that rich and fertile as is the district traversed by the New Orleans, Fort Jackson & Grand Isle Railroad, it is capable of wonderful improvement and extensive development. This is to be done by giving a suburban passenger service of high class with light, speedy engines and comfortable coaches to encourage and develop passenger traffic. There are hundreds of truck farms along the route, and the improvement of railroad facilities will greatly encourage shipments to New Orleans of fruits, vegetables, etc., besides of oysters, shrimp and fish from the more distant points on the line. He has given much time and thought to the suggestion that Grand Isle be developed as a summer resort, and it is quite possible that this will be realized after the building of the extension to that point.

Mr. Haines has had considerable experience as a railroad builder, having been connected with his brother, Elmer T. Haines, in the construction of a number of railroads in both the United States and Canada.

The present officers of the railroad company are Frank T. Howard, president; A. Baldwin, treasurer; F. Muller, auditor and secretary, all of New Orleans; J. S. Landry, superintendent, Algiers, La. The deal, it is said, was closed with Messrs. A. Baldwin, C. H. Hyams, Frank T. Howard and A. H. and G. H. Morris of New Orleans.

### GATE CITY TERMINAL.

**Extensive Work in Atlanta for the New Railroad Into That City.**

According to a report from Atlanta, the Gate City Terminal Co., which is building the new terminals that will be used by the Atlanta, Birmingham & Atlantic Railway, is making rapid progress on its work in the western part of that city. To make room for these yards, freight-houses and other buildings a large number of dwellings were removed, streets have been changed, and the entire district occupied has been and is being remade. Work has been in progress for this task for more than a year, and considerable is accomplished.

The freight yards will extend from Newton street to West Hunter street and from the main line of the railroad to Haynes street. They are 1800 feet long and 500 feet wide. Of this distance 1000 feet will be occupied by tracks for loading

and emptying cars, these tracks being reached from Newton street. There will be two freight-houses, each 50x720 feet and one story high. The ground is now being prepared for the foundations of these buildings, and will be made sufficiently strong to permit of carrying four stories, if necessary. There will be 26 tracks in the terminal with an average length of 1500 feet, this being in addition to the main-line track and the tracks to the roundhouses.

To prepare much of this ground for the yards and approaches necessitated some heavy grading, a space 2600 feet long and 400 feet wide requiring some cuts 44 feet deep and some fills 34 feet high. At another point the building of the line required some fills 50 feet high and cuts 36 feet deep. The grade of a number of streets was changed, and it is said that there is doubt as to whether the cost of this construction can be kept within the estimate of \$1,000,000.

The Atlanta, Birmingham & Atlantic Railway proposes to begin operating trains into Atlanta about December 20, and completion of the line up through Georgia is now being rushed.

### LITTLE ROCK-HOT SPRINGS.

**Plans for the Interurban Electric Railway Are Progressing.**

Mr. L. Garrett, vice-president and general manager of the Little Rock & Hot Springs Electric Railway Co., writes the MANUFACTURERS' RECORD from Little Rock, Ark., saying that the line will be 56 miles long, connecting Little Rock and Hot Springs, Ark., and serving an intermediate territory that is now without transportation and is ideal for development. It is full of natural resources, with a vast amount of timber (yellow pine and oak) and splendid mineral possibilities awaiting railroad facilities. The present population for this intermediate region he gives as 15,000. The line will furthermore connect Little Rock, the capital of the State, a commercial and manufacturing city, with Hot Springs at the other end of the line, which is well known as a health resort, famous for hot mineral springs and its excellent climate, which makes it an all-the-year-around resort. The population at Little Rock and Argenta, adjoining, is given as 70,000, the intermediate population 15,000, the Hot Springs population 15,000, and the annual visitors at Hot Springs are estimated at 150,000, making a total of 250,000 population to be served.

The road is to be built the same as a standard steam railroad, and will be capable of handling steam equipment; it will connect with steam railroads at Little Rock, and will be equipped for handling both freight and passengers. The line will have a very heavy freight tonnage from forest and mineral products, such as lumber, stave bolts, heading, ties, piling, as well as agricultural products of all kinds, as the territory is not served even remotely by the steam roads.

The securities are 5 per cent. bonds, \$1,500,000; preferred stock \$500,000, 6 per cent. The preferred is being offered for sale locally, and Mr. Garrett says that \$400,000 are already placed and construction work will commence as soon as the balance of the preferred shares are subscribed.

### SAVANNAH TO CHATTANOOGA.

**Good Progress Made on Construction of the New Line Through Georgia.**

Construction was begun early in the summer by William J. Oliver of Knoxville, Tenn., on the Savannah, Augusta & Northern Railway at Statesboro, Ga., it being the purpose of the company to build

a road from Savannah to Chattanooga. Since then active work has been done, and an official letter just received by the MANUFACTURERS' RECORD from E. M. Rice, chief engineer, says that grading has been completed and tracklaying will be finished by January 1 from Statesboro to Garfield, Ga., 25 miles. In addition to this, grading is almost completed from Garfield to Louisville, Ga., 31 miles, and the line has been located from Louisville via Thomson to Washington, Ga., 66 miles. Preliminary surveys and partial locations have been made from Washington, Ga., to Chattanooga, Tenn. The right of way and terminals have been secured from Louisville to Washington, Ga.

Mr. W. H. Lynn of New York, president of the railway company, who has just paid a visit to Statesboro to look over the line, is reported from Savannah as saying that notwithstanding the financial stringency this company has been able to obtain all the funds needed to continue its construction.

Considerable interest is manifested concerning the plans of this road between Statesboro and Savannah, and, according to reports from the latter point, it is believed that the track of the Savannah & Statesboro Railroad will be used. There is also said to be a possibility that it will enter Savannah over the Seaboard Air Line, and furthermore, that it is to be connected from a point in the northern part of Georgia with the South & Western Railway, which interests, connected with the Seaboard, propose to build to Spartanburg, S. C. There has not, however, been anything officially announced to confirm these rumors.

### New Equipment.

Dispatches from Austin, Texas, report that the Texas Railroad Commission has issued orders for the purchase of locomotives and cars by 33 railroad companies in that State. These orders include the St. Louis Southwestern; the Chicago, Rock Island & Gulf; the Fort Worth & Denver City; Kansas City, Mexico & Orient; Beaumont, Sour Lake & Western; St. Louis, San Francisco & Texas; Galveston, Harrisburg & San Antonio; Gulf, Colorado & Santa Fe; Houston & Texas Central; Missouri, Kansas & Texas; International & Great Northern; Galveston, Houston & Henderson, and other lines. The commission directs that these orders must be complied with by the end of 1908. Orders thus far issued amount to several hundred locomotives and several thousands of cars.

The Texas & Pacific Railway is receiving deliveries on 40 locomotives purchased from the American Locomotive Co.

The Galveston, Houston & Henderson Railway has ordered two switching engines from the Baldwin Locomotive Works.

The Central of Georgia Railway, according to a dispatch from Macon, has received 25 locomotives and 500 freight cars ordered last summer.

The Baltimore & Ohio Railroad has bought 3223 coal cars from the Consolidation Coal Co., the Fairmont Coal Co. and the Somerset Coal Co. This only amounts to a transfer of ownership, as the cars have been operated over the Baltimore & Ohio Railroad.

The Pressed Steel Car Co., according to a report from Pittsburg, is building 1000 steel underframe box cars for the Seaboard Air Line. At the same works 300 similar box cars are being built for the New York, Philadelphia & Norfolk Railroad.

The Western Car & Foundry Co. of Aniston, Ala., is reported to have begun shipments on 200 flat cars for the United Fruit Co., which will be used in Central America.

The W. J. Oliver Company at Knoxville, Tenn., has completed 100 dump cars for the Panama canal, this being part of the company's large order from the Panama Canal Commission, which covers altogether 2000 cars.

The Texas & Pacific Railway has ordered 10 passenger cars from the St. Charles Car Co., St. Charles, Mo.

The Harriman Lines have this year, it is announced, purchased 271 locomotives and 14,173 freight cars.

The San Antonio & Aransas Pass Railway will purchase 200 ventilated box cars and 275 plain box cars. This company has ordered 25 Rodger ballast cars from the American Car & Foundry Co.

The Chicago, Rock Island & Pacific Railway is reported to be asking bids for 30 box, gondola and flat cars merely to complete several series.

### SOUTHERN'S NEW WORK.

**None Abandoned, But All Will Be Done When Conditions Improve.**

Replying to an inquiry regarding a rumor that the Southern Railway would resume double-tracking on its lines, W. W. Finley, the president, wires the MANUFACTURERS' RECORD as follows:

"Our policy has not been changed. It has been necessary to postpone many important projects for improvement. Only those will be pushed to completion at this time on which work has progressed so far that the public and railway can receive the benefit of their completion at an early day. Other projects have not been abandoned, but will be carried out just as soon as conditions are such that the necessary capital can be secured."

### Automatic Switch Operating.

A patent automatic railway switch-operating device has been invented by Amos Youngblood of North Augusta, S. C. The invention consists of an attachment on the engine and an attachment on the switch, and in its operation the engineman sets his attachment for the purpose of turning the switch, and it is not necessary for him to know how the switch is set, for the operating device will place it where he desires. Should he set the attachment wrong he will be notified of his error by a gong in the cab. The attachment on the locomotive is bolted to the front sill and is braced from the engine frame. The attachment to the switch consists of side rails resting on the ends of the ties and which are moved by the attachment on the engine. This movement sets the switch, which is held in position by a locking attachment. It is further stated that this invention was subjected to every test which could be suggested by experts and practical railroad men, and it worked as smoothly when the train moved at the rate of 60 miles an hour as when it moved at any slower rate. It is further said that the device will absolutely prevent accidents from misplaced, open or split switches, besides saving a large amount of time in operating.

### Knoxville, Sevierville & Eastern.

An official letter from Knoxville, Tenn., to the MANUFACTURERS' RECORD says that the Knoxville, Sevierville & Eastern Railway Co. is chartered to build from South Knoxville through Sevierville, Tenn., to the Tennessee-North Carolina boundary, a distance of 52 miles. The first section, from Knoxville to Sevierville, 26 miles, is to be completed before the remainder is opened for construction. Railway connections at Knoxville are not yet determined.

The line will run through a region of virgin hardwood and mineral resources; it is also an agricultural territory, but entirely without railway facilities. The engineer in charge is W. A. Seymour, and



while the date for receiving bids for construction and for furnishing equipment is not decided, it is hoped to be able to fix such date early next spring.

It is not anticipated that present financial conditions will affect this proposed road, and it is hoped to be able to announce further details by the time named. The president of the company is C. S. McManus, and the directors are S. B. Luttrell, W. P. Chamberlain, Alexander W. McMillan, E. G. Oates, D. M. Rose and others.

#### Official Changes.

S. M. Felton, president of the Chicago & Alton Railroad, has resigned and has been elected president of the Mexican Central Railway. It is further announced that Theodore P. Shonts has been elected president of the Chicago & Alton. He is now president of the Toledo, St. Louis & Western Railway, and also of the Interborough-Metropolitan Company of New York city.

Augustus C. Phelps has been appointed superintendent of the Public Belt Railroad at New Orleans.

E. G. Holladay, formerly chief engineer of the Nashville Terminal Co., has, it is reported, been appointed chief engineer of the Federal Improvement Co. of Chicago.

Leroy Trice, vice-president and general manager of the International & Great Northern Railroad, has resigned that position, and Horace W. Clarke has been appointed to succeed him. Mr. Clarke is at present superintendent of transportation on the Mobile & Ohio Railroad.

A. S. Haines has been appointed district passenger agent for the Illinois Central Railroad at Nashville, Tenn., succeeding F. R. Wheeler, deceased.

#### Coal River Railway Extensions.

An official letter to the MANUFACTURERS' RECORD says that the Coal River Railway Co. has built about 28 miles of line this year, one being an extension from Dartmont to Peytona, six miles, on Big Coal river, and another from Sprout, on the main line, to Madison, 22.1 miles on Little Coal river.

The company proposes next year to build from Madison to the mouth of the Laurel fork of Spruce, 12 miles; also an extension of five miles on the main Spruce above, the mouth of Laurel, besides an extension of five miles on the Laurel fork. On the Big Coal river the line will be extended from Peytona to Racine, two miles, making a total of 24 miles to be built. The headquarters of the company are at St. Albans, W. Va.

#### Charleston-Summerville Deal.

It is reported from Charleston, S. C., that the Charleston & Summerville Electric Railway Co. has been granted its petition for an extension of time to complete its line. It is further stated that the interests of Gen. A. J. Warner and associates have been purchased, and that W. O. Spriggs of New York has been elected president. F. S. Wright of New York, St. Julien Grimke of Charleston, George Tupper of Summerville and others are also interested. Considerable construction has been done on the line, and it is the purpose of the new management, according to press reports, to resume work as soon as financial conditions permit. The length of the line is about 22 miles, and most of it has been graded.

#### Oklahoma City to Trinidad.

Mr. H. P. Ladd, 19½ North Broadway, Oklahoma City, Okla., writes the MANUFACTURERS' RECORD that the Oklahoma, Colorado & Pacific Railway Co. proposes to build from Oklahoma City to Trinidad, Col., about 650 miles or more, but that the

company will not begin work until money conditions are easier or normal.

The names of the directors are: President, George Silsby of Saginaw, Mich., or Oklahoma City; H. P. Ladd, vice-president, Oklahoma City; Edgar Turner, treasurer, Turney, Okla.; L. E. Patterson, secretary, and Herbert Huson, both of Oklahoma City. These gentlemen are also the organizers of the company.

#### The Burgrahaw Traction Co.

A letter to the MANUFACTURERS' RECORD says that a charter has been issued to the Burgrahaw Traction Co. of Burlington, N. C., which proposes to generate, distribute, buy and sell in the towns of Burlington, Graham and Haw River electricity, gas or other illuminants for private or public use; also to equip, operate and maintain a line of street railway in those places and to connect them. It is furthermore authorized to buy and sell real estate. The capital is \$250,000, of which \$30,000 has been subscribed by Junius N. Harden, John M. Cook and J. W. Murray.

The Midland Valley Railroad Co. of Fort Smith, Ark., has increased its capital stock to \$10,000,000. The capital was originally \$1,000,000.

#### Cement-Users' Convention.

The fourth annual convention of the National Association of Cement Users, which takes place at Buffalo, N. Y., January 20-25, 1908, promises to be the best that has yet been undertaken by the association. The exhibition hall is admirably located, being within five minutes' walk from the principal hotels and also the heart of the city. It is particularly well adapted for an exhibition of this nature, as there is not a single post in the main hall. With the exception of two new armories in Buffalo, it has more square feet of floor space on the main floor than any building in the city, and is fully capable of accommodating all those who desire to exhibit their products. Those having bulky machinery will have no trouble in getting it into the hall, as the main entrance door is between 14 and 15 feet high and 12 feet wide, and the floor is practically on a level with the sidewalk. For the convention proper, which is to be held January 21, 22, 23, 24, Concert Hall has been engaged. This is a commodious place, with seating capacity for about 1200 people. It is about 10 minutes' walk from the exhibition building. Application blanks and plan of the floor can be had from the convention manager, Dai H. Lewis, 760 Main street, Buffalo, N. Y.

#### Harriss Manufacturing Co.

The Harriss Manufacturing Co. of Rock Hill, S. C., will soon complete its mill, previously reported by the MANUFACTURERS' RECORD. Its building will be two stories high, 75x140 feet, and cost about \$12,000. This structure will be equipped with heavy spindles for the daily production of 200,000 pounds of coarse yarns— $\frac{1}{8}$ s to 8s. The machinery will cost about \$30,000, and is being furnished by the Lowell Machine Shop of Lowell, Mass. There will be from 25 to 30 operatives employed in the yarn department, and about the same number in the collar-pad manufacturing department. Wm. H. Harriss, president of the Harriss Manufacturing Co., is also architect and engineer in charge of construction and equipment.

The Kentucky Geological Survey has issued from its office at Lexington a bulletin on the fluorspar deposits of the State, showing an increase in the total shipments from Western Kentucky between 1896 and 1906 from 1500 short tons to 11,793 short tons.

## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

#### The Cheraw Cotton Mills.

The Cheraw Cotton Mills of Cheraw, S. C., has organized with James Dillingham of 256 Church street, New York, president, and A. G. Kollock of Darlington, S. C., treasurer and manager. Messrs. Dillingham, Kollock, R. M. Pegues, J. A. Watson, H. D. Malloy and R. T. Cason were elected directors. This company was reported in the MANUFACTURERS' RECORD of November 14 as incorporated with capital stock of \$150,000 and planning to build a mill of 10,000 spindles and 300 looms for the production of cotton cloth. Electricity will probably be the motive power, the supply to be obtained from the Rockingham (N. C.) Power Co.'s proposed Cheraw transmission lines. If this line is not extended to Cheraw, the Cheraw company will use steam power. J. E. Sirrine of Greenville, S. C., is the engineer who will plan, build and equip the mill.

#### The Wachovia Mills.

It is stated that the Wachovia Mills of Chattanooga, Tenn., has had plans prepared for the erection of its proposed cotton mill, to be equipped with 100,000 spindles and 3500 looms for manufacturing cloth. The incorporation and plans of this company were reported in the MANUFACTURERS' RECORD last year, and again referred to on August 8, 1907. The company is capitalized at \$1,500,000, and its general manager is W. I. Young, who telegraphed the MANUFACTURERS' RECORD several months ago confirming the contemplated extent of the machinery. It is understood that Northern capitalists will be largely interested.

#### Shaw Cotton Mills.

It is understood that the officers of the Shaw Cotton Mills of Weldon, N. C., are completing arrangements for the construction of their plant. The company was organized in August, and in September the MANUFACTURERS' RECORD referred to the details of the proposed plant as follows: Two-story brick building, 50x150 feet; 5129 frame spindles for manufacturing two-ply 24 to 36 cotton yarns; gas engine and gas producer for power; Mason Machine Works of Taunton, Mass., engineer in charge and contractor for the machinery. The Shaw Cotton Mills is capitalized at \$100,000, and W. T. Shaw is president.

#### National Duck Mills.

The National Duck Mills of Atlanta, Ga., will manufacture numbered duck in different widths, from 27 to 114 inches, daily output to be 6000 pounds. This company was reported incorporated some weeks ago by the MANUFACTURERS' RECORD. It has purchased a plant already constructed at a cost of over \$100,000, and will operate 76 looms, buying its yarns in the market. From 100 to 150 operatives will be employed. The company is now in the market for 7s three-ply and 12s three-ply cotton yarn on tubes. George P. Howard is president; offices at Simpson and Lambert streets.

#### A \$250,000 Cotton Mill.

The MANUFACTURERS' RECORD is informed that capitalists have arranged for

the organization of a company with capital stock of \$250,000 for the purpose of building a cotton mill at Huntsville, Ala. The names and addresses of the promoters are not yet authorized for publication.

#### Rhodes Manufacturing Co.

The Rhodes Manufacturing Co. of Lincolnton, N. C., began operations last week with electricity furnished from the local transmission of the Southern Power Co. of Charlotte, N. C. It completed its plant some months ago, as was mentioned in the MANUFACTURERS' RECORD, and has an equipment of 5000 spindles and 150 looms for manufacturing heavy cloth. The company is composed of Messrs. John M. Rhodes, C. W. Rhodes and D. P. Rhodes, and is capitalized at \$300,000.

#### Ide Cotton Mills' Enlargement.

The Ide Cotton Mills of Jacksonville, Ala., is progressing with the construction of its enlargement, previously detailed in the MANUFACTURERS' RECORD. This company is providing an additional 25,000-spindle yarn mill and building an electric power plant to supply the new mill and the old one of 11,000 spin-les. Capital stock was increased from \$200,000 to \$750,000 in connection with these improvements. The latter will probably be completed early in 1908.

#### The Wisdom Hosiery Co.

The Wisdom Hosiery Co. of Paducah, Ky., has taken over the Dixie Mills Co., and will put the plant in operation with 150 knitting machines and accompanying machinery. The new company was mentioned last week by the MANUFACTURERS' RECORD as organized with a capital stock of \$150,000, and it is now reported it will double the present installation of machinery. Robert B. Phillips is secretary.

#### Silver Creek Milling Co.

The Silver Creek Milling Co. of Rome, Ga., has been incorporated with a capital stock of \$40,000 and privilege of increasing to \$250,000, its purpose being to build a mill for manufacturing cotton cloth. Messrs. E. A. Greene, H. A. Dean and Ed Dean are the incorporators.

#### Moss and Cotton Felt Manufacturing.

The Kohlmann Moss & Cotton Felt Manufacturing Co. of New Orleans, La., has been incorporated with a capital stock of \$15,000 for the purpose of manufacturing moss and cotton felt and batting. Louis Kohlmann and others are the incorporators.

#### Textile Notes.

Messrs. S. T. Bledsoe, H. G. Spaulding and others of Ardmore, Okla., propose organizing company with capital stock of \$200,000 to build cotton mill.

It is reported that Frederick H. E. Motherner will establish at Charlottesville, Va., a silk mill to be managed by Fred K. Ott of Bethlehem, Pa.

It is reported that the Rope and Yarn Mills of Samantha, Ala., will rebuild its plant burned recently. Mr. George A. Searcy of Tuscaloosa, Ala., is president.

The Coolmees (N. C.) Cotton Mills is understood to be proceeding with the construction of an addition which will accommodate some thousands of new spindles. The company is now operating 40,000 spindles and 1296 looms on the production of flannels, ticking, etc.

The Radford (Va.) Knitting Mills began manufacturing last week. This company was reported organized, etc., by the MANUFACTURERS' RECORD some weeks ago. It has installed 100 knitting machines for the production of cotton hosiery and contemplates adding 50 machines in the future.

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### Yellow-Pine Manufacturers.

Yellow-pine manufacturers of South and East Mississippi met at Hattiesburg last week and discussed several questions relative to present trade conditions. The opinion seemed to be general that conditions will improve soon, and indications favor a resumption of the demand for lumber that prevailed during the spring. A communication from the secretary of the Alabama Lumbermen's Exchange, J. H. Eddy of Birmingham, was submitted to the conference, advising that the mills generally had curtailed their production and that Eastern dealers were only buying for the immediate market. These were willing, however, to pay full prices for what they got, so that it was useless for manufacturers to cut prices below cost to market the product. The meeting was presided over by J. H. Wilder of Epps, Miss., president of the Mississippi Pine Association, with E. A. Walker of Hattiesburg as secretary.

### The Memphis Market.

[Special Cor. Manufacturers' Record.]  
Memphis, Tenn., November 30.

The market situation here is about holding its own in lumber, cottonseed products and with the wholesale jobbing interests. Manufacturers of lumber, staves, etc., have reduced their output from 40 to 50 per cent., and in the country many mills have been closed temporarily. This is likely to make an even and firm market so far as prices are concerned on wood-working products. The American trade for all of these continues good and the car situation is improved. City mills continue to run in most instances, but the hours have been decreased somewhat. This holds good of the hardwood, cypress and cottonwood trade. The export demand for lumber is poor.

The export stave business is reported to be very healthy—a good demand and strong prices. The export lumber business is sluggish.

### Baltimore Lumber Exchange.

The Baltimore (Md.) Lumber Exchange's annual report shows that a total of 103,767,044 feet of lumber was inspected in Baltimore during the past year. The amount of lumber arriving by water aggregated 22,255,235,000 feet, while the exports amounted to 52,801,000 feet of lumber and 440,852 staves. Officers of the exchange for the new year are Messrs. Edward P. Gill, president; John L. Alcock, vice-president; Luther H. Gwaltney, treasurer; Richard W. Price, Lewis Dill, Theodore Mottu, Ridgeway Merryman, George H. Poehlmann, Daniel MacLean, George E. Waters, Maurice W. Wiley, John L. Alcock, Rufus K. Goodenow, George Schumacher and William M. Burgan, managing committee.

### Gulfport's Shipments.

Shipments of lumber from Gulfport, Miss., during October amounted to 20,503,000 feet, loaded on 17 vessels. For the first 10 months of the present year shipments amounted to 253,826,000 feet, as compared with a total of 293,125,000 feet shipped during 1906, indicating that shipments for 1907 will exceed those of last year.

### To Curtail Naval Stores Output.

A number of turpentine operators of Southwest Georgia met at Albany, Ga., last week and formed a preliminary organization for the purpose of bringing about a better understanding among interests

which have hitherto operated independently. It is stated that an agreement was reached to the effect that no new boxes will be cut during the coming season beyond a sufficient number to give the present labor force employment. The operators will work the crop already cut until conditions improve.

### Lumber Notes.

The Norwegian steamer Cecilia cleared from Wilmington, N. C., last week with a cargo of 5925 switch ties and 7737 cross-ties for Cristobal Colon, Panama. The cargo aggregated 690,000 feet, and was consigned by L. J. Merriman.

Proposals will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until December 17 to furnish at the navy-yard, Charleston, S. C., 1500 cypress cross-ties. Blank proposals will be furnished upon application to the navy pay office, Charleston, S. C., or to the bureau, application for proposals to refer to schedule 587.

### Smyrna for American Trade.

Mr. Ernest L. Harris, United States consul at Smyrna, Asia Minor, writes to the MANUFACTURERS' RECORD:

"In the *Daily Consular and Trade Reports*, which you probably receive, you will find a number of reports from this office with valuable information regarding the opportunities this section offers to many products of American industry. While I am far from having exhausted the line of wares which could advantageously be introduced in Asia-Minor, much has been done already in the direction of pointing out to American manufacturers such articles as are the most in demand and in suggesting how they might secure a fair share of the trade.

"I believe this territory will prove a wonderful field for American enterprise. But it should be taken up seriously, and persistent effort should never be released until the difficulties of the beginning are overcome. You can do much through your journal in stirring up the resources of this country and in showing that it deserves better attention than it has had so far. On my side I shall not fail to communicate with you, through the Department, whenever an opportunity presents itself for connection with any of your readers and advertisers."

### Houston Drainage.

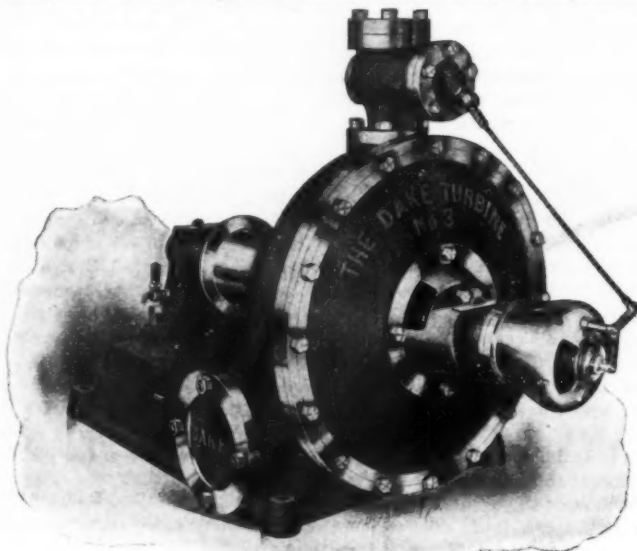
At a number of points in the South there is the liveliest practical interest in the question of the reclamation of swamps and marsh lands through drainage. It is manifested notably in Arkansas, Texas, Louisiana, Mississippi, South Carolina, Florida and North Carolina, and has taken the form of definite action by county authorities and by individuals. Such undertakings are principally concerned with the conversion of waste lands into valuable farming tracts, but at some points the perfecting of municipal systems for sanitary purposes is also being considered. For example, the citizens of Houston are enthusiastic over plans for a comprehensive drainage system for that city. At a recent meeting a committee consisting of the city engineer, county engineer and the engineer from the Southern Pacific Railway and four laymen were appointed to devise plans for immediate relief as well as for an elaborate work of permanent drainage. Last July it was proposed to expend something like \$300,000 upon the construction of two large drainage canals, and under that proposition the city engineer has gone carefully over the ground and estimated upon the work. The city authorities will await the action by the special committee.

## MECHANICAL

### The Dake Steam Turbine.

Increasing attention is being given to steam turbines for power purposes, and it is timely to refer to the type of this

bucket bring the points of resistance to the steam nearer to the mouth of the nozzle and reduce the loss of energy in the flow of the steam from the nozzle to the bucket. The buckets always present the same angle to the flow of steam. This



THE DAKE STEAM TURBINE.

machine perfected by Charles W. Dake, an engineer of experience in this chosen field. The Dake steam turbine is offered for utilization in all instances where the common type of steam engine is now used. In describing it the builder gives the following particulars: "It will be found

angle is such as to conserve the energy of the steam to the greatest degree possible. This method of delivering the steam removes the possibility of shock when the steam enters the buckets. No erosion can, therefore, occur through the impact of the steam against the wall of the bucket.



BUCKET RING FOR DAKE TURBINE.

highly efficient when operating under conditions which make the use of even the better types of reciprocating engines impossible. High efficiency, uniformity of rotation and close regulation must characterize the successful operation of engines used in driving fans, blowers, cen-

Neither can any injury arise through the use of highly superheated steam. The buckets are milled out of solid metal. There are no vanes to crystallize and break off; no parts to work loose. The nozzles are so designed that the steam is delivered to the buckets in a parallel



BUCKET OF DAKE STEAM TURBINE.

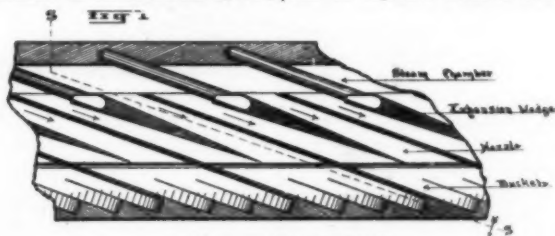
trifugal pumps and electrical machinery. The Dake turbine can be used to great advantage here, particularly when run direct connected with the machine driven. The Dake turbine owes its high efficiency very largely to the superior type of bucket used. The steps in the curved wall of the

column. The walls of these nozzles are at an equal distance apart throughout their length. The expansion of the steam is accomplished by means of an 'expansion wedge' set centrally in the nozzle. This wedge may be readily removed and replaced. It is therefore easy to insert a



wedge properly proportioned to give the highest efficiency possible with the steam pressure used. The outer wall of the nozzle is extended so as to confine the steam against the curved wall of the bucket, thus causing it to produce the maximum of power. The Duke turbine may be operated advantageously at a moderate rotational speed, and the importance of this characteristic should not be overlooked. It is, by reason of its moderate speeds,

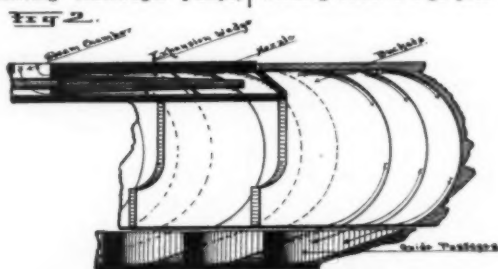
throttle valve and a single lever. The speed of the turbine is controlled by the same lever. Duke turbines built reversing are approximately of the same size and weight as the regular types. The rotative motion reduces the wear on the bearing parts to the minimum. The bearings are, generally speaking, the only wearing parts. These are of simple construction. The parts are made interchangeable, and can be replaced without difficulty when



DAKE STEAM TURBINE.

readily adapted to the driving of electrical generators by direct connection. Builders of generators for use with Duke turbines are not called upon to sacrifice anything in the way of electrical design or construction in order to suit the generator to the turbine speeds. The same principles of construction which make the Duke turbine available for use with electrical generators operate to make it highly desirable for use in driving centrifugal pumps,

necessary. For purposes of comparison it may be said that a Duke turbine running condensing will show a higher efficiency than a compound Corliss engine running condensing. The efficiency of the reciprocating engine changes as the load is increased or diminished. The efficiency of the Duke turbine remains practically the same throughout all variations of load. There are no stuffing-boxes; no parts working under a high pressure in connection

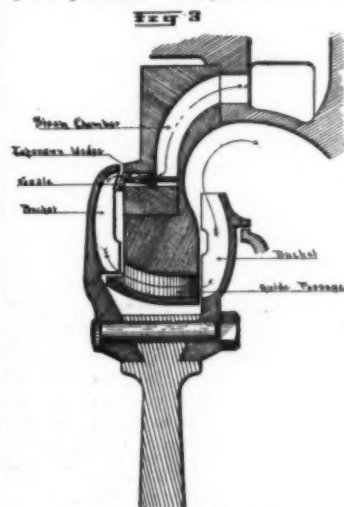


DAKE STEAM TURBINE.

blowers, etc.; in fact, for any service where it is desired to run the engine direct connected to the machine driven, and it may be run at speeds low enough to permit of belt drive. The machine is regularly built for steam pressures ranging from 90 to 200 pounds boiler pressure. In special cases it will be built to run with the exhaust steam from high-pressure reciprocating engines. The use of high steam pressures is of great importance as a means of economy in the consumption of fuel. None of the running parts of the Duke turbine are subjected to the full initial pressure of the steam. The pressure under which this turbine can be operated is therefore limited only by the capacity of the boiler. In like manner the machine may be operated to advantage by means of superheated steam, as it has no frictional parts requiring lubrication in contact with the steam. The governor used is of the centrifugal fly-weight type.

"It is direct connected to the turbine shaft. In turbines of the single-stage type this governor operates a pilot valve, which opens and closes a port that governs a piston valve. This piston valve, in turn, admits steam to the turbine or shuts it off. The governing of the multi-stage turbine is accomplished by means of a make-and-break connection of a shaft driven by worm gearing with a shaft connected with a rotary valve, one-fourth turn of which opens or closes the ports leading to the nozzle. The connection between the shaft sections is made by a clutch, which is operated by means of a forked lever direct connected to a centrifugal governor mounted on the turbine shaft. For marine use the machine is built to run reversing—a fact of prime importance in the consideration of this engine as a power producer for use in boats. The reversing is accomplished by the use of a three-way

tion with which leakage can possibly occur. This insures the maintenance of high efficiency of the turbine during years of service. The efficiency of the Duke turbine is slightly lowered by the use of wet steam or the presence of water in the turbine casings. No damage can arise from the introduction of the water, however, as there are no valves or other parts the action of which can in any way be impeded by its presence. The journals are sup-



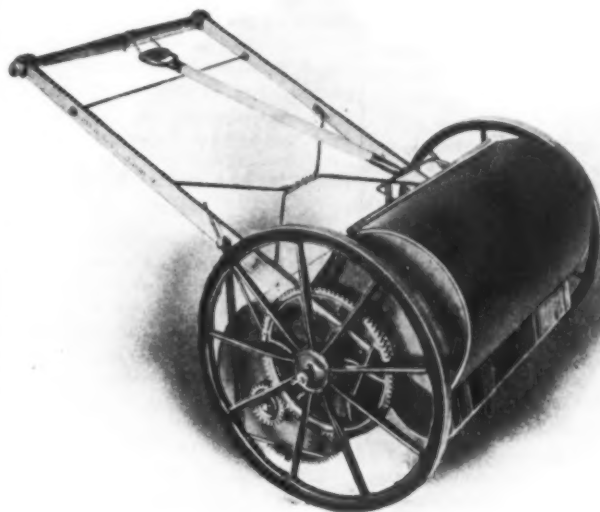
DAKE STEAM TURBINE.

plied with lubricating oil under pressure by means of an oil pump driven by the turbine. In addition to this, each journal has an oil ring, by means of which oil is furnished if for any reason the supply of oil from the pump should be interrupted. Purchasers are not called upon to provide massive and costly foundations. For the smaller sizes no foundations are required. Under no circumstances is it necessary to do more than provide foundations strong

enough to sustain the weight of the machine. Freedom from jar or vibration, uniformity and smoothness of motion—these characteristics, together with their comparatively light weight, make it possible to install Duke turbines where reciprocating engines could not be used. Duke turbines are mounted upon suitable bases. The smaller units, being light in weight and of compact construction, are shipped set up. The larger sizes may be assembled without difficulty. Duke turbines in sizes up to 50 horse-power are built either single stage or multiple stage. In sizes above 50 horse-power they are of the multiple-stage type, except when designed for certain special purposes. The considerations governing the choice between the single-stage and multiple-stage types are wholly those of economical use based upon existing operating conditions. All, whether single or multiple stage, are compound turbines." Six accompanying illustrations will assist the reader in understanding the description. The Duke American Steam Turbine Co. of Grand Rapids, Mich., builds the Duke steam turbine.

#### The Peerless Hand Sweeper.

Through long experience and the use of intelligent methods the Sanitary Street Sweeping Co. says it has produced a hand



THE PEERLESS HAND SWEEPER.

street-sweeping machine which is adapted to all conditions when smooth pavements are to be thoroughly cleaned. This sweeper is being purchased for use on streets, in industrial plants, on piers and in various other establishments. It has been awarded prizes for excellence at the Chicago, St. Louis and Jamestown expositions. In describing this machine the manufacturer says: "The Peerless 'pick-up' hand street sweeper is as simple in operation as a carpet sweeper, and is hardly more complicated in its mechanism. The accompanying illustration will show that it is simple in construction and not at all cumbersome. The machine sweeps a path 30 inches wide, picking up and depositing in a receptacle, which is a part of the machine, the fine dust and the dirt to be found on the street. The receptacle will hold under ordinary conditions the sweepings from an area from between 750 to 1000 square yards, which can be dumped wherever the operator pleases by merely pulling a handle which is attached to it. The sweeping part of the machine consists of a circular brush or broom 30 inches long and 13½ inches in diameter. This revolves within a metal inclosure on the same principle as the revolving brush in a carpet sweeper. This brush is geared to the main axle with a ratio of 4 to 1, so that the brush revolves four times to each revolution of the main axle. By the oper-

ation of a simple attachment the wear of the broom is compensated for at all times, so that without any trouble to the operator it perfectly adjusts itself at the proper angle for sweeping." James S. Barron, Franklin street and West Broadway, New York city, is the sole selling agent of the Peerless sweeper.

#### Columbus Progress.

The possibilities available in all sections of the South for the building up of large industrial and commercial enterprises, equal in capacities, equipment and high character of output to those of any other part of the country, are no more strongly or more effectively shown than through the steady and ever-increasing growth and expansion in all branches of Southern manufacture and trade. Indicative of this growth is that of the Columbus Showcase Co. of Columbus, Ga., which manufactures a complete line of showcases and store fixtures. This company has just published an illustrated catalogue of 171 pages, on which it has been working for the past six years to make it distinctive in portraying not only its extensive line of products, but likewise its steady growth year by year until it has become one of the largest manufacturers in its line in the whole country. The broad spirit which animates the company and which undoubt-

edly has had much to do with its success is evidenced by including in its catalogue a page of terse and timely facts about the facilities and possibilities available in Columbus, Ga., for the location of manufacturing plants generally, where raw materials of a wide variety and cheap power are so conducive to economical manufacture. The opportunity of which this company has taken advantage to boost its own city while exploiting its products is a commendable one, and could be emulated by other Southern business men to the great advantage of the South by giving a more extended publicity to its many available opportunities, and, being backed by their own personal achievements, would have greater weight in influencing others in the selection of the South for the location of their enterprises.

#### Pipe Line Completed.

It is stated that the Hope Natural Gas Co. has completed its 18-inch pipe line for conveying natural gas from Hastings, W. Va., to Cleveland, Ohio, and will begin pumping gas this week. This system, previously detailed in the MANUFACTURERS' RECORD, is understood to represent the investment of about \$4,000,000, of which about \$2,500,000 was for the piping and accompanying parts. The pumping station is located at Hastings.

## FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

## American Products for Turkey.

John G. Yphantidis, Trebizonde, Turkey in Asia, writes that the extracts from his letter in the MANUFACTURERS' RECORD of October 10 did not clearly indicate his ideas. He writes under date of October 31 as follows:

"I am not against the system of representation, and exactly the only right way for doing business is to have representatives in every city, and not as some American manufacturers do; that is, they have a single agent in a single city, let it be Turkish or European, and they rely upon him, entrusting to him the selling of their products and giving to him a monopoly for the whole of Turkey. Thus their goods are known to the city where their agent dwells, and may be known and consumed in more than one Turkish city.

"Now suppose I take the trouble of introducing a sewing machine, recommending it to everyone, and after a certain time a demand for it is created. In such a case orders for one or two machines may go to the manufacturer, and he sends direct, without giving me a commission for them; then the trouble I took in introducing the machines goes for nothing. If I shall not derive a small benefit out of an article that I take the trouble to introduce I care not to undertake to work on behalf of the manufacturer.

"I gave also an example of a lock manufacturer who has an agent in Austria for the whole of Turkey; that is, anyone in Turkey must buy through that agent. At least in Trebizonde, which is one Turkish city, no one ever saw these locks, and it is evident that no one shall ask for things he never saw or heard of. No one knows of the existence of the manufacturing firm, but the manufacturers themselves think, and are mistaken by thinking, that they are represented in Turkey. Quite different would be the case if they had a representative in every Turkish city of importance."

[Mr. Yphantidis is understood to have established an extensive trade in goods imported from various countries, and he is desirous of adding American products to those which he now offers throughout Turkey. American manufacturers who are prepared to export to him can doubtless correspond with advantage regarding representation.]

## Mexico Needs Dredges.

Escude & Potts, Apartado 331, City of Mexico:

"We are at present interested in securing the agency for a good dredge. Specifications for these machines are as follows: Dredge should be of floating type, and if possible work on rollers; maximum dimensions should be 14 meters long, 2.80 meters wide, and .50 meter the maximum draft; products excavated should be placed 15 meters away; should be able to be anchored at sides or bottom, according to necessities; elevated parts should be easily dismounted, so that no parts should be over 1.50 meters above the line of flotation, with the view to dredge passing under bridges. Dredge should not receive the products of excavation. We will be glad to get complete specifications, prices, weights, etc., for the machines; also the total weight of the dredge, system and power of the motor, whether electric, gas or gasoline; amount of power for 10 hours' work; amount of excavation in cubic meters, taking into account two or three

different kinds of earth; also if dredge will be able to use its own mechanism for propelling from one location to another."

## Norway Wants Rails.

Harald Michelsen, Post Box 65, Christiania, Norway:

"The Norway State Railways invite offers of 4552 tons rails, tenders to be submitted before January 10, and I beg to hand you specifications. It will interest me very much to learn whether some American firm may be willing to submit a binding offer, with 10 per cent. commission for me, subject to the conditions. If you happen to know a firm that will take an interest in the matter I shall feel obliged if you will show the specifications and request prospective bidders to cable me the one word, 'Rails,' when I will immediately send the drawings." (Copy of specifications mentioned is on file in offices of MANUFACTURERS' RECORD.)

## Corn Oilcake and Products.

Messrs. Durieux & Morpurgo, 2 Adolphe Thiers, Marseilles, France:

"Knowing that you take a great interest in introducing American products in all markets, we take the liberty of addressing you with regard to corn oilcakes, which we are informed are manufactured to a large extent in your city. We would feel extremely obliged if you could put us in communication with said manufacturer or with any other firm that would be well placed to make offers of corn cakes, a product which we would be able to sell in large quantities and on any terms and conditions which might suit the sellers."

## Concrete and Other Building Materials.

Aktiebolaget Linotol-Beton, Fabiansgatan 27, Helsingfors, Finland:

"As we are making a specialty of concrete work and various kinds of building materials, also novelties of all kinds, we shall at any time be glad of your putting us in connection with firms whose goods would be worth handling."

## Dry Fork Collieries.

The Dry Fork Collieries Co. of Bramwell, W. Va., has incorporated with a capital stock of \$25,000 to develop coal property on the Jaeger and Southern branch of the Norfolk & Western Railway. The extent of the development has not been fully determined, but the company expects to be in a position within a short time to ship 10,000 tons of coal per month. A mining plant will be installed at first to cost about \$25,000, and bids for the construction of this have already been received. No coke ovens are contemplated at present. Officers of the company are Messrs. George Dunlison, Jr., president; W. T. Williams, general manager, and J. T. Wilson, secretary and treasurer. Mr. Dunlison is the engineer in charge of construction work.

## For Attention of Architects.

The Government is planning to build a postoffice and courthouse at New Orleans, La., the amount available being \$1,200,000, including complete construction and equipment excepting lighting fixtures and mural paintings. The Secretary of the Treasury is inviting architects to join in a preliminary competition for furnishing the plans and specifications, these to be submitted not later than December 18. The Commission of Award is composed of James Knox Taylor, supervising architect, Treasury Department, Washington, D. C.; James Rush Marshall, 1516 H street, Washington; Arnold Brunner and William Martin Aiken, 33 Union Square, New York city. Mr. Taylor can be addressed for further particulars.

## MINING

## Sulphur and Pyrite in 1906.

The sulphur industry of the United States during the last few years has been characterized by steady growth in consumption, increase in production and decrease in quantity and value of imports as a result of the development of domestic resources.

Statistics collected by Dr. David T. Day of the United States Geological Survey and published in an advance chapter from "Mineral Resources of the United States, Calendar Year 1906," show that the domestic production increased from 181,677 long tons, valued at \$3,706,560, in 1905, to 294,153 long tons, valued at \$5,006,678, in 1906. Exports amounted to 22,237 long tons, valued at \$460,435.

The great production of sulphur in Louisiana continued in 1906, and the success of the Frasch sulphur process, by which the mineral is melted by streams of superheated water pumped into the Louisiana wells, has been fully demonstrated. Local demands for sulphur for sheep dip and for use in destroying vegetable parasites have been very well met by developments in Utah, Wyoming and Colorado.

The dominating factor in the world's supply of sulphur has been the production of the material in Sicily, which in 1906 showed a large decrease, chiefly due to the loss of the American trade through the development of the Louisiana deposits. The exports from Sicily to the United States have decreased steadily for the last four years—from 155,996 long tons in 1903 to 41,283 tons in 1906.

The pyrite production of the United States increased from 253,000 long tons in 1905 to 261,422 long tons in 1906, but the price declined from an average of \$3.71 per ton in 1905 to \$3.56 in 1906, causing the total value to decrease from \$938,492 in 1905 to \$931,305 in 1906.

Pyrite burning entered significantly into the sulphuric-acid business in 1882, when the product was 12,000 tons. In 1885 the product had increased fourfold; five years later it had nearly doubled again, and increase has since been rapid. The growth has been due not only to the cheapness of this source of sulphur, but to the use of the cinder in the blast furnace. The dominant position in the pyrite supply is occupied by Virginia, and California and New York follow.

## Florida Diatomite.

The fact that the South contains many rare mineral deposits of high commercial value, and which can be economically worked, is evidenced by a recent discovery in Florida of a comparatively large deposit of a true diatomaceous earth which is practically a pure silica. The deposit covers an area of 200 acres, ranging in depth from 10 to 30 feet of raw material, and it is said that conservative estimates indicate that it will produce from 300,000 to 500,000 tons of calcined or finished product. A plant was erected for mining, calcining and handling the material, and this, it is said, has demonstrated the feasibility of producing the material economically, profitably and on a large commercial scale. The manufacture of products from "diatomite," as this material is known, has not been extensively followed in this country, but it has reached its highest state of development and manufacture in Germany, where it is known as "kieselguhr." These deposits are mainly found in Hanover province of Northern Germany, and it has converted what was once a poor, desolate district into an active industrial center. The possibilities of this material is shown by the uses and appliances made of it by the German manufacturers. Among these may be mentioned its use in manufacture

of paints, wood fillers, putty, fireproof colors, alizarin, anilin, camphor, chemical earthenware, light stones, fire-brick and dynamite, as a filling agent and for general insulating and filtering purposes. The principal products from this material are those for insulating and fireproofing purposes, which will bring it into competition with asbestos and magnesia. The American Diatomite Co. of 74 Broadway, New York, controls the Florida deposits, and will develop them.

## Tennessee's Mineral Production.

The annual report of Chief Mine Inspector R. A. Shifflett of Tennessee shows the value of Tennessee's mineral products for 1906 to be \$20,278,196, an increase of \$3,894,040 as compared with figures for 1905. Coal ranks first in importance, followed in order by pig-iron, phosphate, coke, copper and iron ore. The coal production amounted to 6,272,457 short tons, valued at \$7,565,286; coke 484,672 short tons, valued at \$1,350,629; ore 879,059 long tons, valued at \$1,252,853; pig-iron 434,388 long tons, valued at \$6,347,047; crude copper ores 539,381 short tons, valued at \$1,321,483, and 17,354,781 pounds of refined copper, valued at \$3,211,966; phosphate 490,815 long tons, valued at \$1,852,840; marble 361,937 cubic feet, valued at \$576,259. The report states that many improvements have been made in sanitary and other conditions during the year, and much money expended for devices and appliances, affording the miners greater safety and facility in entering and leaving the workings.

## Arkansas Fuller's Earth Co.

The Arkansas Fuller's Earth Co. of Little Rock, F. W. Duttlinger, president, which was recently incorporated with a capital stock of \$25,000, informs the MANUFACTURERS' RECORD that it will install a plant of 30 tons daily capacity. The structure will be 50x150 feet, to be equipped at a cost of \$6500. The company states that it desires to purchase two 10 to 15-horse-power hoisting engines, one 50-horse-power engine and boiler, drier, crusher and pulverizer of 15 to 20 tons capacity.

## Will Mine Barytes.

The Georgia Baryes Co. of Asheville, N. C., S. J. Fisher, manager, P. O. Box 228, has recently incorporated with a capital stock of \$10,000 to develop barytes deposits. It will erect a plant of frame and sheet iron and equip it for a capacity of two cars of crude barytes per day. The company states that it wants prices on log or ore washers, revolving screens, pumps and conveyors, 20 to 25-horse-power engine and boilers (portable) and one and two-inch black iron piping.

## Big Deal Pending.

A deal is pending between A. C. Scherr of Charleston, W. Va., and a number of Pittsburg capitalists for the sale of 25,000 acres of iron-ore land in Rockingham, Augusta and Albemarle counties, Virginia, involving about \$500,000. Details as to the sale have not been announced.

## Mining Notes.

During October a total of 1,943,385 tons of coal was shipped over the several railroads entering the West Virginia fields.

The Island Granite Co., Inc., of Mayo Island, Richmond, Va., has incorporated with a capital stock of \$10,000 to quarry granite, producing about 100 tons per day of the crushed product. Officers of the company are W. B. Gay, president and treasurer; L. E. Uilman, secretary, and O. D. Killebrew, engineer in charge of operations.



# Construction Department

## TO OUR READERS!

In order to understand and follow properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

### ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

## BRIDGES, CULVERTS, VIADUCTS

Blackshear, Ga.—Pierce and Ware counties contemplate erection of bridge across the Satilla river to cost \$6000. Address Pierce County Commissioners.

Fitzgerald, Ga.—Ben Hill county will vote December 20 on issuance of \$25,000 of bonds for construction of bridges and roads. Address County Commissioners.

Glen Rose, Texas.—Somervell county has awarded contract to J. G. Allsberry, Houston, Texas, at \$13,560 for construction of steel bridge over the Brazos river between Glen Rose and Cleburne, Texas; to be completed by July 1. (County was reported in August as having voted bonds for building the bridge.)

Lynchburg, Va.—Council committee on streets will award contract December 7 for construction of wooden foot bridge in Harrison street; A. R. Long, chairman street committee; H. L. Shaner, City Engineer. (See "Machinery Wanted.")

Ocean City, Md.—Baltimore, Chesapeake & Atlantic Railway, A. C. Shand, chief engineer, Philadelphia, Pa., is to build new draw costing \$10,000 at the Ocean City bridge.

Pocahontas, Ark.—Reported that St. Louis & San Francisco Railroad, J. F. Hinckley, chief engineer, St. Louis, Mo., will build bridge across Black river at Pocahontas.

Savannah, Ga.—City will construct steel highway drawbridge over the Great Ogeechee river at Kings Ferry in Chatham county. Bids will be opened December 30; G. Reuben Butler, Clerk. (See "Machinery Wanted.")

## CLAYWORKING PLANTS

Mooringsport, La.—D. C. Richardson-Taylor Lumber Co., D. C. Richardson, president and general manager, Shreveport, La., will establish plant at Mooringsport for manufacturing face brick from clay deposits it controls. Plant will have a daily capacity of 50,000 bricks, and gas from the company's wells will be used for burning the product. American Clay Machinery Co. will furnish the equipment. R. H. West, formerly of St. Louis, Mo., is in charge of construction.

(Company was previously reported incorporated with \$2,000,000 capital stock for the manufacture of yellow-pine lumber.)

North Augusta, S. C.—James P. Armstrong, Augusta, Ga., has purchased the Woods Pottery Co. It is understood that Mr. Armstrong represents a company which will organize a new company and make improvements and enlargements to plant, continuing the manufacture of earthenware of various kinds.

## COAL MINES AND COKE OVENS

Altapass, N. C.—Interstate Coal Co. incorporated with \$500,000 capital stock by John B. Jackson of Altapass, C. H. Hiett, Johnson City, Tenn., and S. R. Jennings, Camp, Va.

Barbourville, Ky.—J. J. Hoblitzell, Meyersdale, Pa., has purchased 15,000 acres of coal and timber lands in Leslie, Perry and Letcher counties for future development.

Bramwell, W. Va.—Dry Fork Colliery Co. incorporated with \$25,000 capital stock; president, George Duglison, Jr.; W. T. Williams, general manager; J. T. Wilson, secretary and treasurer; will develop coal property on Jaeger and Southern branch of Norfolk & Western Railway; estimated capacity 10,000 tons coal per month; no coke ovens at present; George Duglison, Jr., constructing engineer in charge; bids for construction have been received; cost of plant \$25,000.

Chattanooga, Tenn.—Grand View Coal & Timber Co., previously reported incorporated with \$100,000 capital stock, will soon begin further development of its 6500 acres of coal and timber land in Marion county on Walden's Ridge. It is now opening coal mines and preparing to develop the timber. Arrangements will either be made with the Interstate Club for building an incline from Signal Point to foot of mountain at brink of river for shipping coal and timber, or the Grand View Company will construct an incline. Company was also previously mentioned as proposing location of townsite on Walden's Ridge, to be known as Grand View. Officers of company are Robert Marshall, Pittsburg, Pa., president; J. Lee Allen, Chattanooga, Tenn., vice-president; D. M. Hertzog, Uniontown, Pa., treasurer and general counsel; Grier E. Tress, Pittsburg, Pa., secretary; general offices, Blackstone Building, Uniontown, Pa.

Elkins, W. Va.—Elkins Coal, Oil & Gas Co. incorporated with \$10,000 capital stock by H. L. Nestor, E. C. Ice, W. H. Cobb, J. A. Bent and others.

Hartford, Ark.—Young Coal Co. incorporated with \$35,000 capital stock; D. J. Young, president; J. P. Hoyer, vice-president, and C. J. Jewett, secretary-treasurer.

Logan, W. Va.—E. R. Johnson Coal & Mining Co., E. R. Johnson, president, is reported as having leased 1500 acres of coal land for development.

Quick, W. Va.—Williams Coal Co. incorporated with \$65,000 capital stock; S. B. Williams, president and general manager; J. T. Williams, secretary; J. F. Melvin, treasurer; offices at 562 Front street, Scranton, Pa. Plans for operation will be completed in about three weeks.

Scottsboro, Ala.—Reported that Dr. F. D. Pierce, probably of Scottsboro, and Dr. R. V. Pierce, Buffalo, N. Y., have purchased the property of the Alabama Black Band Iron & Coal Railway Co., consisting of about 16,000 acres of coal, timber and mineral lands, and will develop the coal and timber resources. Dr. F. D. Pierce is now operating a coal mine near Island creek.

Spadra, Ark.—Reported that Enterprise Colliery Co., W. H. Taylor, manager, Memphis, Tenn., has purchased properties of the Consolidated Coal Co. at Spadra and will continue developments; 15 mines now in operation.

Uniontown, Ky.—Kentucky Coal Mining Co., Charles A. Baker, president, Dayton, Ohio, has purchased, it is reported, the Southern Tidewater Coal Co., mine having daily capacity of 1500 tons. Company will soon begin erection of tipples on river front. In addition to mines just purchased, company owns mines at Waverly and Bakers, Ky., and about 6000 acres of coal lands. (Company was recently mentioned to establish coal yards in New Orleans, investing about \$100,000.)

## CONCRETE AND CEMENT PLANTS

Chattanooga, Tenn.—Chattanooga Concrete Co. incorporated with \$10,000 capital stock

by H. A. Winer, Harry Winer, J. E. Lawton, Raymond Reeves and others.

## COTTON COMPRESSES AND GINS

Branford, Fla.—Branford Farmers' Union Warehouse & Ginning Co. incorporated with \$1000 capital stock; M. J. Sweat, president, and R. E. Langston, secretary.

Gause, Texas.—Farmers' Union Warehouse Co., recently reported incorporated, will establish cotton gin and grist mill; to be ready for next cotton season; cost \$6000; president, J. W. Adams.

Ihrle, Miss.—H. R. Ihrle contemplates erection of larger cotton gin next year to replace plant recently reported burned.

Monette, Ark.—Farmers' Monette Gin Co. has increased capital stock from \$4000 to \$6000; A. R. Limford, president.

Tolar, Texas.—Tolar Gin Co. incorporated with \$5000 capital stock by F. C. Fertier, H. Musick, T. M. Rowland and others.

## ELECTRIC-LIGHT AND POWER PLANTS

Baltimore, Md.—Forestglan Land Co., Chas. F. Behrens, manager, 561 Calvert Building, will erect central electric lighting and heating plant to supply 900 double houses to be erected in suburbs of Baltimore. (See "Machinery Wanted.")

Blue Ridge, Ga.—City has voted \$9000 of bonds for construction of electric-light plant. Address The Mayor. (Mentioned in October.)

Brevard, N. C.—Brevard Light & Power Co. contemplates enlarging plant and installing ice-manufacturing equipment; J. W. Chapman, manager.

Burlington, N. C.—Burgabaw Traction Co. incorporated with \$250,000 capital stock to manufacture and distribute electricity and gas, etc., to Burlington, Graham and Haw River, N. C.

Columbus, Ga.—Columbus Power Co. is completing surveys of its water-power properties on the Chattahoochee river between Columbus and West Point preparatory to further developments. It is preparing to build in the future a third water-power electrical plant for the transmission of electricity for manufacturing and power purposes. It is understood the various properties are capable of furnishing 125,000 horse-power, and at one point on the river possibly an 80-foot dam will be constructed. Company's two present plants are distributing 80,000 horse-power. F. E. Reidhead is manager at Columbus. Messrs. Stone & Webster, 84 State street, Boston, Mass., are the general managers. (Previously mentioned.)

Dadeville, Ala.—City will vote December 9 on issuance of \$10,000 of bonds to improve electric-light plant. Address The Mayor.

Louisville, Ky.—Kentucky Electric Co. is reported as to erect farm power-house at a cost of \$125,000; Bryan Allen, secretary.

Oakland, Md.—Youghiogheny Light & Power Co., previously reported incorporated by Hiram P. Tasker, Alfred G. Sturgis, Truman Westland and others, will be capitalized at \$200,000. Company will develop water-power on the Yough river, Muddy and Deep creeks, near where river has cut a gorge 300 feet deep between mouths of creeks, giving creeks a fall of about 300 feet and river a fall of about 200 feet; will be located about half a mile below Deep Creek fall. No dams will be required. Pipes will receive water above each fall and convey it to impulse water-wheels. Estimated cost of plant and equipment \$200,000. Hiram P. Tasker, Hotel Manhattan, is general manager.

Oklahoma City, Okla.—Columbia Electric Co. incorporated with \$25,000 capital stock by A. J. McMahan of Oklahoma City, Arthur V. Allen and A. C. Allen, both of Chicago, Ill.

Pawhuska, Okla.—Reported that W. W. Cook & Son, Muskogee, Okla., have contract to construct electric plant, water-works and sewerage system at Pawhuska; cost about \$100,000.

Portsmouth, Va.—Retail Merchants' Association, J. A. Morris, president, contemplates organizing company to install lighting plant; Mr. Morris and Nathan Levy, committee in charge.

Talladega, Ala.—Alabama Power Co. contemplates building electric plant and installing 300-horse-power engine and boiler and

new generator at the shoals plant. Contract for the machinery has been awarded.

Whitney, N. C.—The Whitney Company has begun the erection of concrete power-house, 150 feet high, 90 feet wide and 260 feet long, to be equipped for generating about 46,000 horse-power; other details stated previously. John S. Henderson, Salisbury, N. C., is manager.

## FOUNDRY AND MACHINE PLANTS

Baltimore, Md.—Cotton Machinery.—Frank A. Lazenby, cotton-machinery manufacturer, Bush and Wilcombe streets, has recently purchased land adjoining his plant for future extensions.

Baltimore, Md.—Crook-Horner Company, machinists and machinery supplies, 301 North Howard street, has awarded contract to Thomas L. Jones & Son, 410 West Saratoga street, for remodeling five-story warehouse at 17-19 East Pratt street and construction of one-story steel-frame building, 60x125 feet, with corrugated-iron sides; Ellicott & Emmart, architects, Union Trust Building.

Birmingham, Ala.—Electrical Machinery and Supplies.—Oliver Electric Co., recently reported incorporated with \$6000 capital stock, will handle electrical machinery and supplies, undertake general repair work, rewind armatures, manufacture field coils, etc. Shop has been equipped. Samuel W. Oliver is president and general manager, and James P. Balding, secretary-treasurer.

Bristol, Va.—Tenn.—Retort Cleaner.—Vance & Dulaney Company has been organized by Samuel M. Vance and Fred Dulaney to manufacture a patented retort cleaner to be used in connection with gas manufacturing plants.

Denton, Texas.—Woven-wire Fence.—Denton Woven Fence Wire Co. organized with \$30,000 capital stock; G. H. Blewett, president; J. B. Schmitz, vice-president; J. C. Colt, treasurer; L. L. Fry, secretary, and T. K. Blewett, manager. Company has completed 65x100-foot building costing \$7000 and installed machinery costing \$10,000.

Gordon, Ala.—Stump-pulling Machinery.—Beasley Steam Stump Puller Co. contemplates expending about \$50,000 for buildings and machinery for plant recently referred to; daily output to be 5 steam stump pullers and 10-horse-power stump wringers; may buy equipment for building hoisting engines or complete plant already established. Address R. L. Beasley. (See "Machinery Wanted.")

Houston, Texas.—Pumps.—Edw. C. Hart, 125 East 56th street, Chicago, Ill., recently referred to as to establish pump-manufacturing plant, contemplates contracting for the manufacture of the pumps. Southern manufacturers in irrigated territory will be given preference. (See "Machinery Wanted.")

Humboldt, Tenn.—Machine Works.—Trenton Machine Works & Supply Co., Trenton, Tenn., and the Humboldt Machine Works at Humboldt will be consolidated as the Humboldt Machine Works. Equipment of Humboldt plant will be increased and gasoline engines and boilers will be manufactured in addition to regular machine work. H. A. Watson and H. Baumgartner, formerly of Trenton, Tenn., and W. M. Buntun, formerly of Jackson, Tenn., are interested. (Messrs. Baumgartner and associates were recently mentioned as having purchased the Humboldt Machine Works.)

Montgomery, Ala.—Cotton Harvesting Machinery.—Worswick-Haardt Harvester Co., incorporated with \$300,000 capital stock to manufacture cotton harvesting machinery and implements, motors, tools, etc., making a specialty of the manufacture of the cotton picker invented by James Worswick. Incorporators are J. E. Worswick, George P. Haart, A. N. Kennedy and others.

Oklahoma City, Okla.—Oil Burner.—Automatic Crude Oil Burner Co., incorporated with \$200,000 capital stock by J. P. Weatherly, L. S. Dodson, W. P. Steele, E. L. McCain, all of Pawhuska, Okla., and others.

Stamford, Texas.—Iron.—W. J. Holloway, recently of Fort Worth, Texas, has established the Stamford Iron Works.

St. Charles, Mo.—Repair Shop.—American Car & Foundry Co., St. Louis, Mo., has had plans prepared by J. Haines, chief engineer, for repair shop; brick and stone; electricity; cost \$10,000.

Washington, N. C.—Machine Shop.—Gaylord Moore will establish machine shop, which will probably be operated as the Pamlico Iron Works. Building has been secured, which will be equipped with lathes, planer, boring and pipe machines, etc.

## ICE AND COLD-STORAGE PLANTS

Booneville, Ark.—Booneville Ice, Light & Storage Co. incorporated with \$50,000 capital stock by C. G. Yates, S. P. McConnell, M. G. Latimer and others.

Brevard, N. C.—Brevard Light & Power Co. contemplates installing five-ton ice plant; J. W. Chapman, manager. (See item under "Electric-Light and Power Plants.")

Covington, Va.—Alleghany Ice Co. incorporated with \$25,000 capital stock; W. D. McAllister, president, and C. D. Lam, secretary.

Hattiesburg, Miss.—Southern Lumber & Ice Co., C. E. Neeley, St. Louis, Mo., president, will increase capital stock from \$50,000 to \$80,000 and include in its charter privileges the manufacture of lumber. (Company was reported incorporated in October as "Southern Ice Co., to build 50-ton ice plant, erecting frame building 55x120 feet costing \$3000, equipped with machinery costing \$24,000.) Machinery purchased. (See item under "Lumber-Manufacturing Plants.")

Welaka, Fla.—Welaka Mineral Water Co., Jacksonville, Fla., recently noted incorporated to engage in sale of mineral waters, etc., will purchase ice plant already established; president, D. U. Fletcher; secretary and treasurer, Dr. A. D. Williams.

Welch, W. Va.—Welch Ice & Cold Storage Co. has awarded contract to E. C. Greer, Williamson, W. Va., and M. R. Long, Huger, W. Va., for concrete foundation work on ice and cold-storage plant. Structure will be 120x74 feet. Contract for superstructure has not been awarded. I. J. Rhodes, R. B. Bernheim and others of Welch and the J. M. McCoch Company, Huntington, W. Va., are the organizers of the company, and were recently mentioned to incorporate a company with \$50,000 capital stock to establish ice and cold-storage plant, investing about \$35,000.

## IRON AND STEEL PLANTS

Ensley, Ala.—Iron Furnaces, Steel Plants, etc.—Tennessee Coal, Iron & Railroad Co. has resumed construction work, which had been temporarily suspended several weeks ago. This construction includes the various and extensive betterments to furnaces and steel plant and erection of additions which have been previously detailed, and will represent the expenditure of several million dollars. In October the company completed the overhauling and relining of No. 1 furnace, and was reported as planning repairs to No. 3 furnace. J. S. Collier, superintendent, is in charge of improvements. General offices of company at Birmingham, Ala.; New York offices at 115 Broadway.

## LUMBER-MANUFACTURING PLANTS

Charlotte Court House, Va.—Virginia Lumber Co., Staunton, Va., has purchased tract of timber in Charlotte county for \$20,000.

Chattanooga, Tenn.—Grand View Coal & Timber Co., previously reported incorporated with \$100,000 capital stock, will soon begin further development of its 6500 acres of coal and timber land in Marion county on Walden's Ridge. It is now opening coal mines and preparing to develop the timber. Arrangements will either be made with the Interstate Club for building an incline from Signal Point to foot of mountain at brink of river for shipping coal and timber, or the Grand View Company will construct an incline. Company was also previously mentioned as proposing location of townsite on Walden's Ridge, to be known as Grand View; general offices, Blackstone Building, Uniontown, Pa. (See item under "Coal Mines and Coke Ovens.")

Clyo, Ga.—Reported that A. J. Gothe will install planing mill.

Grand Saline, Texas.—Grand Saline Mill & Lumber Co., recently reported incorporated, will engage in the production of hardwood lumber; daily capacity about 15,000 feet; Thos. H. Peery, secretary-treasurer; S. B. Maupin, vice-president; building erected and machinery installed.

Hattiesburg, Miss.—Southern Lumber & Ice Co., reported incorporated in October as "Southern Ice Co.," has purchased plant of Hattiesburg Lumber Co. at \$7000. An amendment to charter has been filed, increasing capital stock from \$50,000 to \$80,000, and including in its privileges the manufacture of lumber; C. E. Neeley, St. Louis, Mo., president; Frank McClure of Hattiesburg, treasurer; C. A. Bowman, St. Louis, Mo., vice-president; three buildings, 70x150 feet, will be erected; cost of buildings and machinery, \$30,000; machinery purchased; company will manufacture lumber and ice. (See item under "Ice and Cold-Storage Plants.")

Kinston, N. C.—Parrott & Crabtree will establish sawmill and shingle mill; will erect buildings and install machinery. (See "Machinery Wanted.")

Livingston, Tenn.—Spurrer-Williams Lumber Co. will rebuild saw and planing mill recently reported burned; will erect building 50x60 feet; product, rough and finished lumber. (See "Machinery Wanted.")

Mingo County, W. Va.—C. W. Campbell, Huntington, W. Va., and J. D. Lowry, Catlettsburg Ky., recently noted to have purchased timber on Guyandotte river in Mingo county, will not at present develop same. It is proposed to add other timber to this purchase.

Mobile, Ala.—David E. Sayre (formerly of New Orleans, La., and Beaumont, Texas) is reported as to build lath and shingle mill, utilizing mainly logs of trees blown down during storm.

Norfolk, Va.—Patterson Lumber Co. incorporated with S. F. Minter, president; E. B. Lawrence, secretary, both of New York, N. Y., and N. B. Patterson of Norfolk, treasurer.

Ocala, Fla.—Knight Turpentine Co., incorporated with \$100,000 capital stock; Robert J. Knight, president, and H. L. Anderson, secretary-treasurer.

Shellhorn, Ala.—John R. Caldwell & Son, recently reported to replace burned plant, will erect buildings and install machinery at cost of \$7500; architect, Wm. Henderson; machinery purchased; manufacture decking, boards, flooring and siding; daily capacity, 15,000 feet.

Stoner (not a Postoffice), Miss.—Progress Lumber Co. incorporated with \$20,000 capital stock to operate mill at Stoner having daily capacity of 40,000 feet; J. R. Flint, president, Pittsburg, Pa.; J. C. Tompkins, vice-president, and C. H. Armbricht, secretary, both of Hattiesburg, Miss.

Valdosta, Ga.—J. N. Bray Lumber Co. incorporated with \$50,000 capital stock, and privilege of increasing to \$200,000, by J. N. Bray, W. D. Lewis and Georgia Land & Timber Co.

Walls, Texas.—Walls Lumber Co., recently reported incorporated with \$10,000 capital stock, will handle lumber, sash, doors, blinds, shingles, mountain cedar and builders' hardware; president, F. D. Brandt; vice-president, R. A. Irvin; secretary and treasurer, W. L. Guyler.

Webster Springs, W. Va.—Webster Springs Lumber Co. incorporated with \$25,000 capital stock by J. P. White, J. S. Beury, N. C. Morrison and others.

## MINING

Asheville, N. C.—Barytes.—Georgia Barytes Co., recently reported incorporated with \$10,000 capital stock by R. S. Smith and others, will engage in the production of crude barytes; daily capacity, two cars; will erect frame and sheet-iron building; manager, S. J. Fisher, P. O. Box 228. (See "Machinery Wanted.")

Augusta County, Va.—Iron.—A. C. Scherr of Charleston, W. Va., is negotiating the sale of 25,000 acres of iron-ore lands in Augusta, Albemarle and Rockingham counties, Virginia, to Pittsburg (Pa.) capitalists. Reported that about \$500,000 is involved.

Christiansburg, Va.—Stone.—Alleghany Lime Co., incorporated to quarry fluting stone, etc.; J. S. Vaughan, Shawsville, Va., president. (See item under Miscellaneous Manufacturing Plants.)

Cushman, Ark.—Manganese.—Reported that W. H. Denison, Cheyenne, Wyo., has sold 2000 acres of manganese land near Cushman, and development work will probably be undertaken.

Duenweg, Mo.—Lead and Zinc.—Howard Gray, Carthage, Mo., is reported as having purchased 250 acres of land from the Sadler Lead & Zinc Co. at \$40,000.

Jefferson County, Mo.—Galena Ore.—H. J. Cantwell, St. Louis, Mo., will reopen the Virginia mine in Jefferson county, developing galena ore deposits.

Kelso, Tenn.—Phosphate.—Dr. L. H. Gilliam and C. W. and John Taylor have purchased phosphate lands for development.

Kelso, Tenn.—Phosphate.—H. W. Bonner, Fayetteville, Tenn., and John Lloyd of Kelso have secured options on phosphate land near Kelso and will undertake development.

Parkersburg, W. Va.—Stone.—Reported that Thomas Cary, Constitution, Ohio, will develop stone quarries near Parkersburg and establish plant for making grindstones.

Little Rock, Ark.—Fuller's Earth.—Arkansas Fuller's Earth Co., F. W. Duttlinger, president, recently reported incorporated to mine fuller's earth, will establish plant with

30 tons daily capacity; will erect building 50x150 feet; cost of machinery, \$6500. (See "Machinery Wanted.")

Richmond, Va.—Granite.—Island Granite Co. incorporated with \$10,000 capital stock; W. B. Gay, president and treasurer; L. E. Ullman, secretary; will engage in the production of crushed granite; capacity, 100 tons per day; O. D. Killebrew, engineer; principal address, Mayo Island, Richmond, Va.

Roanoke, Va.—Mica.—Roanoke Mica Mining Co. incorporated with \$35,000 capital stock, to mine sheet mica; engineer in charge, Booker Robertson, R. F. D. No. 2, Francisco, N. C.; manager, C. M. Armes.

Sarcozie, Mo.—Lead and Zinc.—Reported that the Rathbone Mining Co., composed of Springfield (Mo.) capitalists, has leased land from R. B. Boyd and associates near Sarcozie for development.

Virginia—Diatomite Mines.—The Diatomite Company of America incorporated with \$300,000 capital stock to develop diatomite mines in Virginia, by Daniel H. Emory and F. Howard Smith, both of 227 St. Paul street, Baltimore, Md., and Harry W. Davis, Wilmington, Del. Offices of company at 516-A Equitable Building, Baltimore, Md.

Washington, Va.—Copper.—Mt. Marshall Copper Co. incorporated with \$500,000 capital stock; J. L. Logan, president, and L. H. Weissleder, secretary-treasurer, both of Cincinnati, Ohio; Oliver Conner, engineer in charge of operations. (Recently mentioned.)

## MISCELLANEOUS CONSTRUCTION WORK

Chatsworth, Ga.—Flume.—L. R. Rich Fluming & Development Co. incorporated to build flume for transportation of lumber, etc., from mountains to railroad at Chatsworth.

Demopolis, Ala.—Locks.—P. H. O'Brien, Anniston, Ala., has contract at about \$1,000,000 to build locks 2 and 3 on Tombigbee river, 50 and 25 miles, respectively, from Demopolis. About three years will be required to complete the work.

Galveston, Texas.—Jetty Construction and Dredging.—David M. Picton of Galveston and Rockport, Texas, is lowest bidder at \$456,510 for construction of jetties at Aransas Pass. Bids were based on following quantities: 80,000 tons riprap, 23,000 tons crushed stone, 10,000 linear feet of railroad trestle and railway complete and 6000 feet of transfer wharves. Bowers Southern Dredging Co. of Galveston is lowest bidder at 14 cents per cubic yard, or a total of about \$115,000, based on a yardage of 825,000 cubic yards, on the dredging of channel through Turtle cove to connect Aransas Pass and Corpus Christi by direct route; channel to be 8½ feet deep, 75 feet wide at bottom and about 26,000 feet long; Capt. J. C. Oakes, United States Engineer. (Previously mentioned.)

Houston, Texas.—Irrigation System, etc.—The Raywood Company of Texas incorporated with \$750,000 capital stock to grow rice, etc., by Edwin D. Lowe, Boston, Mass.; T. J. Anderson, C. B. Moll and E. F. Rowson, all of Houston, and others. It is proposed to establish mill for manufacturing pulp from rice straw. All rice by-products will be utilized, and it is probable that alcohol will be manufactured. Last July Mr. Lowe was reported as having purchased the properties of the Raywood Rice Milling and Canal Co., including 21,000 acres of land, 12,500 acres of which were planted in rice; rice mill with daily capacity of 2400 bags; 37 miles of main canals and laterals and pumping station on Trinity river with capacity of 3000 horse-power. It was then stated that purchaser would install electrical machinery in pumping plant, extend canals and eventually bring 30,000 within the range of water lifts, expending between \$250,000 and \$300,000. Mr. Lowe is now registered at the Macatee Hotel, Houston, and will be general manager of company.

Houston, Texas.—Irrigation.—K. Kishil and G. Hagiya, both of Japan, have awarded contract to H. A. Paine for machinery for extension of canal and improvement of irrigation plant near Orange, mentioned in October as having been leased from Des Moines Rice Canal Co. Lease also includes rice farm of 3500 acres; W. I. Bettis, Houston, Texas, in charge of engineering work.

Tuscaloosa, Ala.—Locks.—Dravo Construction Co., Pittsburg, Pa., is lowest bidder for construction of locks Nos. 14 and 15 on the Black Warrior river, about 20 miles from Tuscaloosa, at \$320,223.50 and \$309,137, respectively; bid on lockhouses in both instances \$3000.

## MISCELLANEOUS ENTERPRISES

Alden, Okla.—Telephone System.—Alden Telephone Co. incorporated by H. S. Sturgis

and others; secretary, J. R. Lowery; engineer in charge, S. J. Carpenter; will establish telephone system. (See "Machinery Wanted.")

Anniston, Ala.—Publishing.—Hot Blast Publishing Co., incorporated with \$6000 capital stock to continue the publication of the Anniston Hot Blast. C. V. Rainwater, president, and W. T. Edmondson, secretary-treasurer.

Asheville, N. C.—Contracting.—Carolina Construction Co. incorporated with \$50,000 capital stock by F. H. Allison and others to contract for railroad work.

Atlanta, Ga.—Hardware.—East Point Hardware Co. incorporated with \$5000 capital stock by D. C. Lyle, J. B. Hardin and J. S. Arnold.

Baltimore, Md.—Suburban Residential Development.—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, will develop for residential purposes 140 acres of land in suburbs. Central electric-light and steam-heating plant, water-works, sanitary sewerage system and macadam roadways will be constructed. (See "Machinery Wanted" and "Dwellings.")

Baltimore, Md.—Distilling Plant.—Carroll Springs Distilling Co., Harry J. Daly, president, 815 Frederick avenue extended, has purchased a lot 50x250 feet adjoining its plant for future extension.

Baltimore, Md.—Municipal Street-lighting Contract.—Municipal Board of Awards, City Hall, will receive bids until December 11 for street gas and naphtha lamp fixtures and the operation and maintenance of same in accordance with specifications to be had at office of Robert J. McCuen, Superintendent of Lamps and Lighting, City Hall. This contract will cover the entire city. Supply of gas is furnished by another company. (See "Machinery Wanted.")

Baltimore, Md.—Printing and Publishing.—Battle Cry Publishing Co. incorporated with capital stock of \$2000 to conduct printing and publishing plant by John M. Hering, Builders' Exchange Building; James W. Frizzell, G. R. Gorsuch and others.

Baltimore, Md.—Marble and Mosaic Work.—Baltimore Marble & Mosaic Co. incorporated with capital stock of \$10,000 to contract for marble mosaic and terrazzo work by James J. McGrath, 207 North Calvert street; Wm. H. Gorsuch, Howard E. Boone, Herbert R. Stimpson and Gustavus A. Sehlstedt, Hamilton avenue, near Harford road.

Baltimore, Md.—Telephone System.—The Maryland Telephone Co., Maryland Telephone Building, Lexington and Courtland streets, which operates a telephone system extending throughout all parts of city and surrounding territory, has been purchased by interests represented by H. P. Miller of Columbus, Ohio. Temporary organization of new company has been formed by election of H. P. Miller, vice-president, and Joseph Taylor and F. M. Twomey, both of New York, and Dudley G. Browning of New Jersey, directors. H. P. Miller is in charge of the company, with offices in Maryland Telephone Building. Purchase price was about \$300,000; subject to mortgage bonds for \$2,155,000. (Sale of this company to Chesapeake & Potomac Telephone Co. not consummated.)

Bellevue, Va.—Stock Farming.—Virginia Stock Farm Co. incorporated with capital stock of \$100,000 to breed and promote breeding of horses, cattle and other live-stock, etc.; has purchased Terrace View, comprising 830 acres of land, and expects to purchase 1200 to 1500 acres adjoining and increase eventually to 5000 acres; James P. Woods of Roanoke, Va., president; Henry Fairfax of Aldie, Va., vice-president; Edward C. Burks of Bedford City, Va., secretary, and John Victor of Lynchburg, Va., treasurer. J. Elliott Hall of Bellevue is general manager.

Birmingham, Ala.—Laundry.—Birmingham Railway, Light & Power Co. will install laundry equipment. Plans for building prepared by Wm. Ernest Splink. (See item under "Electric Light and Power Plants.")

Center, Texas.—Oil Wells.—Flat Fork Oil Co. will be incorporated with \$15,000 capital stock to continue its established plant; H. C. Parker, president; J. D. Peddy, vice-president; J. C. Rogers, secretary-treasurer, and John Burns, business manager.

Chattanooga, Tenn.—Contracting.—Chattanooga Contracting Co. incorporated with \$10,000 capital stock by W. L. Lawton, Harry Winer, Raymond Reeves and others to engage in general contracting, making a specialty of sidewalk construction.

Clarksburg, W. Va.—Oil and Gas Wells.—Marshville Oil & Gas Co. incorporated with \$25,000 capital stock by W. Gaston, M. J. Francis, J. M. Garrett and others.

Columbia, Mo.—Land Improvement.—Missouri Improvement, Land & Development



Co., incorporated with \$5000 capital stock by J. M. Batterton, A. J. Estes, F. W. Nelder, Meyer and others.

Cureo, Texas.—Hardware.—J. R. Nagel Hardware Co. incorporated with \$10,000 capital stock by H. J. R. A. and H. W. Nagel.

Dixie, La.—Douglas & Sentell Company incorporated with \$20,000 capital stock; J. M. Sentell, president; W. H. North, vice-president, and J. S. Douglas, secretary-treasurer.

Elkins, W. Va.—Oil and Gas Wells.—Elkins Coal, Oil & Gas Co. incorporated by H. L. Nestor and others. (See item under "Coal Mines and Coke Ovens.")

El Paso, Texas.—Printing Plant.—Bule-Rood Printing Co. incorporated with \$15,000 capital stock by W. J. Bule, E. S. Rood and George E. Wallace. (Bule Press and E. S. Rood & Co. were recently mentioned as having consolidated and to be incorporated under the above title, having leased building, which would be equipped with new equipment, in addition to present machinery.)

Farwell, Texas.—Hardware.—Porter Hardware Co. incorporated with \$25,000 capital stock by J. E. Porter, O. M. Conolly, R. N. Smith and others.

Gainesville, Fla.—Farming.—Colson Farming Co. incorporated with \$10,000 capital stock; Perry M. Colson, president, and Barney R. Colson, secretary-treasurer.

Gallatin, Tenn.—Publishing.—Gallatin Printing & Publishing Co., recently reported incorporated with \$3000 capital stock, will continue the Gallatin News and make improvements to plant; Prof. Charles E. Hawkins, president; R. W. Caldwell, vice-president; D. B. Parryear, secretary-treasurer, and Ed Albright, editor.

Glasgow, Ky.—Telephone System.—Travis Taylor, representing the Home Telephone Co., has purchased franchise, and construction of telephone system will probably soon begin. Nearly all wires will be underground.

Guthrie, Okla.—Oil Wells.—Clark Oil Co. incorporated with \$600,000 capital stock by James E. Manter, Clarence E. Eaton and Charles D. Fullerton, all of Portland, Maine, with James Hepburne of Guthrie, State agent.

Hinton, W. Va.—Photography.—Hinton Picture Co. incorporated with \$25,000 capital stock by O. C. Hutchinson, Forest Hill, C. W. Ferrell and others.

Houston, Texas.—Telephone System.—Houston Home Telephone Co. is proceeding with arrangements for construction of proposed automatic telephone system. S. D. Levings of McMeen & Miller, Chicago, Ill., who have contract to superintend work, has prepared general plans and estimates cost of construction at \$646,746. Mr. Levings will begin at once to prepare construction plans showing location of poles, underground conduits and cables, sizes and types, etc. Concrete building will be erected in Houston. System will be extended to Houston Heights, where a substation will be built; J. S. Slusher is president and F. G. Reed, secretary-treasurer. (Mentioned in October.)

Humble, Texas.—Oil Wells.—Allen Oil Co. incorporated with \$5500 capital stock by T. Martin, F. L. Hughes, W. H. Black and others.

Key West, Fla.—Steam Laundry.—Columbia Steam Laundry incorporated with \$40,000 capital stock; Benjamin D. Trever, president, and George F. Morris, secretary-treasurer.

Lakeland, Ky.—Laundry.—Central Kentucky Insane Asylum laundry, recently noted to be erected after plans by McDonald & Dodd, Lincoln Savings Bank Building, Louisville, Ky., will be a one-story building, with concrete foundations; 47x250 feet; steel trusses; slate roof; bids to be opened December 4.

Liberty, N. C.—Telephone System.—Liberty Telephone Co. incorporated with \$10,000 capital stock by J. L. Hardin, M. J. Reitzel, J. F. Pickett and others.

Little Rock, Ark.—Telephone System.—Southwestern Telephone & Telegraph Co. is reported as preparing plans for an expenditure of about \$500,000 in improvements to its system at Little Rock, including extension of underground conduit system and enlargement of conduits on Main street; P. K. Baker, local superintendent.

Louisville, Ky.—Automobiles.—Oldsmobile Co. of Kentucky incorporated with \$20,000 capital stock by W. E. Stokes, Lansing, Mich.; W. F. Glenn, Jr., and L. Markel, both of New York, N. Y.

Manchester, Va.—Lithia Water.—Holly Lithia Springs Co. incorporated with \$50,000 capital stock; J. J. Montague, president; J. P. Carson, vice-president; T. E. Owens, secretary, and G. O. Rubel, treasurer, all of Richmond, Va.

McKinney, Texas.—Construction.—Hood &

Camp Construction Co. incorporated with \$5000 capital stock by F. L. Hood, S. J. Camp and H. W. Brough.

Memphis, Tenn.—Grain Elevator.—Fred Friedline & Co., architects and builders, Chicago, Ill., have contract to erect grain elevator for Webb & Maury, 90 Front street, to replace structure previously reported burned. New building will be of crib construction and cost \$14,000. (Webb & Maury, composed of Walter Webb and H. H. Maury, previously reported as having purchased Merchants' Grain Elevator and Warehouse and to combine plant with new buildings to be erected; storage capacity of completed plant to be about 300,000 bushels of grain in bulk and package, with handling capacity of 75 to 100 carloads daily.)

Monticello, Fla.—Tobacco Growing.—Jefferson County Sumatra Tobacco Co. organized with \$15,000 capital stock and expects to produce from 10 to 15 acres of shaded tobacco. J. J. Nolthenius will be in charge of growing and marketing; Dr. G. B. Glover, president; J. H. Perkins, vice-president, and T. M. Puleston, secretary-treasurer.

Morrison, Okla.—Oil and Gas.—Black Bear Oil & Gas Co., recently reported incorporated with \$100,000 capital stock by G. W. Sanders and others, has not yet elected officers. It is contemplated to lease land and hire drillers to sink well early next year.

Oriental, N. C.—Publishing.—Oriental Publishing Co., recently reported incorporated, will erect and equip building for printing establishment; cost \$1000; manager, J. T. Spradling. (See "Machinery Wanted.")

San Angelo, Texas.—Transfer Company.—San Angelo Transfer Co. incorporated with \$5000 capital stock by J. W. White, J. A. White and Ed Sutherland.

San Antonio, Texas.—Farm.—White Farm Co., incorporated with \$7000 capital stock by J. P. Newcomb, Jr., Walter B. Franklin and W. A. Wurzbach.

San Antonio, Texas.—Oil Wells.—R. S. Reed, Reedville, Texas, contemplates organizing company to drill for oil near San Antonio.

St. Louis, Mo.—Publishing.—International Magazine Co. incorporated with \$3000 capital stock by J. W. Brooks, Lyon H. Robyn and L. Henderson.

St. Louis, Mo.—Drugs.—J. P. Huhn Drug Co. incorporated with \$5000 capital stock by Alice F. Huhn, Adolph Baab, John P. Huhn and others.

Trezevant, Tenn.—Telephone System.—Trezevant Telephone Co., organized to construct telephone system. Oliver C. Sloan, president, and Nevins Arnold, secretary.

Washington, Ga.—Construction.—Washington & Elberton Construction Co. incorporated with \$75,000 capital stock by S. S. Bobo and associates to construct railroads, telephone and telegraph lines, etc.

Welaka, Fla.—Mineral Waters.—Welaka Mineral Water Co., Jacksonville, Fla., recently noted incorporated, will engage in sale and shipment of mineral waters from well at Welaka; will purchase established ice-manufacturing plant; president, D. U. Fletcher; secretary and treasurer, Dr. A. D. Williams.

#### MISCELLANEOUS MANUFACTURING PLANTS

Alvin, Texas.—Creamery.—Alvin & Houston Creamery Co. incorporated with \$10,000 capital stock by W. B. DeLand, M. M. Mortensen, D. I. Wilhelm and others.

Austin, Texas.—Lime Works.—Austin White Lime Co. incorporated with \$50,000 capital stock by A. F. Martin, J. A. Martin and Alfred H. Robinson.

Baltimore, Md.—Vending-machine Factory.—International Vending Machine Co. incorporated with capital stock of \$250,000 by R. H. Pollock, Knickerbocker Building, Lexington and North streets; E. D. Schmitt, both of Baltimore, and W. Frank Thomas, Westminster, Md.

Baltimore, Md.—Can Factory.—Referring to factory building to be erected in Highlandtown (suburb of Baltimore) by Continental Can Co., 8 Light street, Baltimore, Md., and formerly of Syracuse, N. Y., the following contractors are estimating on construction: John Cowan, 106 Madison street; Gindfelter & Chambers, 2072 Woodberry avenue; Frederick Decker & Son, 1209 East Biddle street; McIver & Piel, Builders' Exchange Building; John Kunkel, 413 King street, and Henry Rippel, 7 Clay street; four stories; brick; mill construction; slag roof; modern tin-can manufacturing machinery; Wyatt & Nolting, architects, Keyser Building, Calvert and German streets.

Bayboro, N. C.—Chemicals.—Pamlico Chemical Co., previously reported incorporated, will take over, enlarge and operate the plant

of Cornell, Stan & McCotter Company at Bayboro, and contemplates building plant at Washington, N. C.; J. F. Cowell, president, Washington, N. C.

Birmingham, Ala.—Macaroni Factory.—J. Cusimano, Chartres and Barracks streets, New Orleans, La., and associates have organized company and will erect three-story building, to be equipped as macaroni factory with daily capacity of 1000 cases. Bids are invited; plans and specifications on file at offices of Union Produce Co., 204 Morris avenue, Birmingham. Mail proposals to Mr. Cusimano at New Orleans; usual rights reserved; D. Cataral, manager.

Chillicothe, Mo.—Granite and Marble.—Chillicothe Marble & Granite Co., recently reported incorporated with \$5000 capital stock, will engage in the production of monuments and cut-stone work; president, Frank P. Reynolds; secretary-treasurer, Karl M. Blanchard; manager, Edw. Schweizer.

Christiansburg, Va.—Lime Works.—Alleghany Lime Co. organized with \$25,000 capital stock to quarry fluxing stone, manufacture lime, cement and kindred products at Houchins, about three miles from Christiansburg, taking over properties of Montgomery Lime Co.; J. S. Vaughan, Shawsville, Va., president; J. B. Hamilton, vice-president, and A. A. Phlegar, Jr., secretary-treasurer, both of Christiansburg.

Clayton, N. C.—Manufacturing.—Clayton Manufacturing Co. has increased capital stock from \$50,000 to \$100,000; John P. McEwan, president.

Dallas, Texas.—Paper Mill.—Oak Cliff Paper Mill Co., John G. Fleming, manager, will erect new plant. J. R. Gilliland has contract to erect reinforced concrete building, which will be equipped with modern machinery, increasing capacity of former plant.

Enid, Okla.—Manufacturing.—DeHass Manufacturing Co. incorporated with \$10,000 capital stock by J. E. DeHass, H. O. Glassen and R. B. Dodson.

Farmville, Va.—Manufacturing.—W. H. Robertson will erect three-story factory building.

Gadsden, Ala.—Fertilizer Plant.—Etowah Fertilizer Co. will erect addition to plant, increasing capacity by 50 per cent.; building will be 50x50 feet; ordinary brick construction; Mr. Sampey, president.

Galveston, Texas.—Lecturephones.—Electrical Engineers and Contractors' Association, organized to manufacture lecturephones, contemplates increasing capacity of plant; G. C. Fairfield, president; H. A. Hogan, vice-president, and C. P. Howe, secretary-treasurer.

Gause, Texas.—Grist Mill.—Farmers' Union Warehouse Co., recently reported incorporated, will establish grist mill in connection with cotton gin; cost \$6000; J. W. Adams, president.

Greenville, Tenn.—Cannery.—A. J. Patterson will establish cannery recently reported. (See "Machinery Wanted.")

Greenwood, Miss.—Mattress Factory.—Greenwood Mattress Co. incorporated with \$25,000 capital stock by W. T. Loggins, N. S. Wright and John B. Petty.

Houston, Texas.—Pulp Mill.—The Raywood Company of Texas, incorporated with \$750,000 capital stock, will establish pulp mill for utilizing rice straw, etc. (See item under "Miscellaneous Construction Work.")

Houston, Texas.—Stock-food Factory.—Texas Stock Food Co. incorporated with \$15,000 to manufacture steam-cooked molasses-mixed foods for cattle according to patents controlled by the Pratt Construction Co., Decatur, Ill. Arrangements were made some months ago with F. B. Weeks of the Mercantile Grain Co. for the erection of mill. Building is now practically completed, has been leased for 15 years and equipped for daily capacity of eight cars of feed. F. M. Pratt, president and general manager, and Charles F. Pratt, secretary-treasurer, both of Decatur, Ill., will become residents of Houston, residing at the Savoy Apartments.

Jackson, Tenn.—Cannery.—E. B. Simmons, Huntingdon, Tenn., is interested in establishment of cannery factory at Jackson, in which about \$8500 will be invested.

Jacksonville, Fla.—Bakery.—Puckhaber Bakery incorporated with \$25,000 capital stock; Fred H. Puckhaber, president, and B. B. McDonnell, secretary.

Jacksonville, Fla.—Shoe Factory.—C. F. Cole Shoe Co. incorporated with \$15,000 capital stock; J. C. Little, president, and C. F. Cole, secretary-treasurer.

Knoxville, Tenn.—Mineral Wood.—E. W. Irwin, Indianapolis, Ind., is reported to organize company with \$100,000 capital stock to manufacture mineral wood from marble quarry refuse, to be used between floors for deadening noise.

Lake Charles, La.—Gas Plant.—Reported that H. S. Price, representing St. Louis and Chicago capitalists, will apply for franchise to build gas plant and furnish Lake Charles with light and fuel.

Little Rock, Ark.—Rice.—A. D. Swan, 1900 Battery street, can give information relative to erection of rice mill by New Orleans capitalists. (Recently mentioned.)

Live Oak, Fla.—Drugs.—Brown-Thompson Drug Co. incorporated with \$10,000 capital stock; C. S. Brown, president, and W. L. Ulmer, secretary-treasurer.

Lynchburg, Va.—Manufacturing.—The R. S. Oglesby Company incorporated with \$250,000 capital stock; J. R. Gilliam, president; R. S. Oglesby, vice-president, and L. D. Horner, secretary-treasurer.

Maringouin, La.—Moss Factory.—E. A. Allen is interested in contemplated establishment of moss factory. (See "Machinery Wanted.")

Marion, S. C.—Guano.—Marion Guano Co., recently reported to establish guano factory, has installed complete set of mixing machinery in 40x160-foot building; probable engineer, Robert M. Haig, Charleston, S. C.; daily capacity 35 to 40 tons ammoniated guano; officers, R. J. Blackwell and S. W. Norwood.

Morristown, Tenn.—Stock-medicine Factory.—Brown Stock Medicine Co. organized by George P. Moore, R. T. Moore and A. C. Bassett to manufacture medicines for cattle.

New Orleans, La.—Varnish Factory.—Reported that the Royal Velvet Finish Co., Edward W. Brown, president, will establish varnish factory in New Orleans. Mr. Brown is registered at the St. Charles Hotel.

Oklahoma City, Okla.—Gas Plant.—Pintsch Compressing Co. has forwarded bids for erection of gas plant in Oklahoma City to its general offices, 2 Rector street, New York city, and contract will soon be awarded. Plant will be constructed of brick and cement, have floor space of 35,000 square feet, and be equipped for manufacturing illuminating gas for trains, using crude oil from the Bartlesville fields. About \$25,000 will be invested. Pipe lines will be constructed to all parts of Oklahoma. Chicago, Rock Island & Pacific Railroad has provided railway facilities. W. H. Ribbet, main offices in Kansas City, Mo., is superintendent of district. (Mentioned in October.)

Oklahoma City, Okla.—Manufacturing.—Practical Manufacturing Co. incorporated with \$20,000 capital stock by A. J. McMahan and D. B. Welty, both of Oklahoma City; Frank H. Shepherd, Andrew J. Hoover and M. G. McLaughlin, all of Jacksonville, Ill.

Oklahoma City, Okla.—Packing Plant.—Phillips Packing Co., E. J. Phillips, president and manager, will establish packing plant, investing between \$35,000 and \$40,000 in buildings. Pens will accommodate 2000 head of stock.

Parkersburg, W. Va.—Electric Battery.—Davis Electric Co., Inc., is name of company recently reported organized to manufacture electrical medical battery invented by Jesse R. Davis; J. Menton Caldwell, president.

Parkersburg, W. Va.—Glass Factories.—Interstate Glass Co., recently reported incorporated with capital stock of \$1,000,000, is understood to be a branch of the United States Window Glass Co. of New York, controlling patents for manufacturing window glass. It is reported as proposing to merge into the new corporation various glass factories in West Virginia, including a 36-blower plant at Grafton, 36-blower plant at Sistersville and 36-blower plant at Buckhannon, two plants at New Martinsville, one at Clarksburg and plants at Morgantown, West Union and Point Pleasant; also one at Salem, Va. The Interstate Glass Co. is said to propose building a 120-blower plant at Parkersburg. Charles F. Teter of Philippi, W. Va., is president, and S. A. Moore, also of Philippi, is secretary.

Quincy, Fla.—Tobacco Factory.—Sowell-McJunkins Tobacco Co. incorporated with \$25,000 capital stock; B. B. Sowell, president, and J. H. McJunkins, secretary-treasurer.

Roll, Okla.—Broom Factory.—Company incorporated to establish broom factory; W. J. Stauber, president; W. H. Pankey, vice-president, and W. R. Stauber, secretary-treasurer.

San Antonio, Texas.—Cottonseed-oil Mill.—Alamo Oil & Refining Co. has completed cottonseed-oil mill, oil refinery and soap factory, in which \$100,000 has been invested. Mill building is of reinforced concrete, with floors and partitions of same material; 225x46 feet; equipment includes 500-horsepower Corliss engine, which operates a crusher capable of grinding 120 tons of cottonseed daily; six presses; 12 filters, fitted

with magnets; electric plant, weighing machines, automatic meal scales, etc. Seed-house is of frame and contains about 500,000 cubic feet of storage space; office is separate building constructed of rock; Charles T. Jackson, president. (Previously mentioned.)

Star, W. Va.—Glass Works.—Ramona Glass Co. incorporated with \$70,000 capital stock by A. Joseph Stenger, Charles T. Boublier, Otto Sigirant and others, all of Morgantown, W. Va.

St. Louis, Mo.—Billboard Manufacturing.—Automatic Billboard Co. incorporated with \$20,000 capital stock by John H. Spannagel, Beverly B. Deems, Charles E. Wiley and others to manufacture and deal in automatic billboards, etc.

Tallahassee, Fla.—Tobacco Factory.—Leon Gadsden Tobacco Co. incorporated with \$50,000 capital stock; W. H. Covington, president, and Dan C. Neel, secretary-treasurer.

Van Buren, Ark.—Canneries.—Wm. Chesterfield is managing officer of company having contracts for erection of three canning factories in peach belt of Arkansas; cannery at Russellville recently mentioned; other canneries are in contemplation; to be fitted with standard and sanitary machinery for making preserves and butters and canning fruits and vegetables; each cannery to cost from \$20,000 to \$35,000. (See "Machinery Wanted.")

Vidalia, La.—Mill and Elevator.—St. Paul Mill & Elevator Co., S. J. McKenzie, president, St. Paul, Minn., is reported to establish plant in Vidalia at a cost of \$25,000.

Winston-Salem, N. C.—Marble Works.—Forsyth Marble Co. incorporated with \$25,000 capital stock by J. A. Wall & Sons, Benhaw & Hall, R. A. Mills and others.

### RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Atlanta, Ga.—Gate City Terminal Co., controlled by the Atlanta, Birmingham & Atlantic Railroad and the Seaboard Air Line Railroad, is proceeding with construction of terminals, previously reported. Freight yards will be 1800 feet long and 500 feet wide; 1000 feet will be covered with tracks. Buildings will include two freight-houses 50x720 feet, one story high, with provisions for adding four additional stories; engine-houses and warehouses. Tract 400 feet wide and 2000 feet long has been graded, culverts and bridges have been constructed, various street improvements have been completed, and retaining walls from 15 to 25 feet high have been built along Haynes and Mangum streets. It is estimated that over \$1,000,000 will be expended.

Pelham, N. C.—Southern Railway has awarded contract to Roberts, Shaffer & Co. for rebuilding coal chute recently burned at a loss of about \$50,000. It is understood that new chute will cost \$50,000.

Port Bolivar, Texas.—Gulf & Interstate Railway Co. of Texas, L. P. Featherstone, president, Galveston, Texas, is proceeding with erection of pier, previously mentioned. About half of the round piling has been driven, and work on bulkhead will soon begin. Slip will be 1200 feet long and 300 feet wide, with piers on each side 1200 feet long and 300 feet wide, making the completed structure 900x1200 feet. Each arm of pier will be covered by sheds about 210x200 feet, giving approximately 252,000 square feet of shed room on each pier. Apron and landing place for ferry barge will be located at inner end of slip; five tracks will be laid on each arm, one on apron on each side of shed and three in center; left arm of the structure will not be built until later.

Spencer, N. C.—Reported that Southern Railway, D. W. Lum, chief engineer, Washington, D. C., will enlarge shop and erect roundhouse.

St. Louis, Mo.—The Terminal Railroad Association is understood to have decided to proceed with its proposed improvements, involving the expenditure of about \$4,000,000 for the construction of a viaduct at Compton avenue and Mill Creek valley, improvement of freight-handling district, erection of freight depot, establishment of extensive yards and other betterments. W. S. McClesney, Jr., is president. (Previously referred to at some length.)

### ROAD AND STREET IMPROVEMENTS

Atlanta, Ga.—Venable Bros. have contract to repave Broad street with creosoted wood block and with granite block between the car tracks at \$3.38 for wood block and \$2.65 for granite block; R. M. Clayton, City Engineer. (Recently mentioned.)

Baltimore, Md.—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert

Building, will construct macadam roadway for suburban development containing 900 houses. (See "Machinery Wanted.")

Blackshear, Ga.—Pierce County Grand Jury has recommended construction of road from Blackshear to Waycross, a distance of five miles. Address Pierce County Commissioners.

Charleston, W. Va.—John Graybill has contract for paving Charleston street. (City was reported in September as having voted \$55,000 of bonds for paving and curbing streets, etc.)

Charlotte, Tenn.—Dickson County Turnpike Co. is name of company recently reported to organize to turnpike public road from Dickson to Charlotte; organization not yet completed. J. J. Taylor may be addressed.

Columbia, S. C.—Georgia Engineering Co. has contract at \$173,560.19 for paving Main street to Elmwood avenue with vitrified brick. Entire work embraces about 65,000 square yards of pavement, 17,000 linear feet of combined curb and gutter and 4500 linear feet concrete storm drains. (Recently mentioned.)

Fitzgerald, Ga.—Ben Hill county will vote December 20 on issuance of \$25,000 of bonds for construction of road and bridges. Address County Commissioners.

Kansas City, Mo.—Jackson County Court, J. M. Patterson, Presiding Judge, is planning to close gaps in principal rock roads and build two new rock roads connecting with Cass and Johnson counties roads. It is estimated that about \$55,000 will be required to complete the gaps and build bridges.

Little Rock, Ark.—Pulaski county will improve and construct West 12th street from city limits west to a point on Mt. Ida road, a distance of 19,683 feet. Bids will be opened January 2; Charles Heckler, J. Kanis and Adam Penzel, board of directors R. I. D. No. 1; Gerhard Morgner, engineer in charge.

Lonaconing, Md.—City is considering an election to vote on issuance of \$25,000 of bonds for street paving, etc. Address The Mayor.

Memphis, Tenn.—City will pave 1200 feet on Laclede avenue with gravel, as recently noted; concrete curb and gutters will be laid; work is in charge of J. H. Weatherford, City Engineer. (See item under "Sewer Construction.")

Meridian, Miss.—City has voted \$50,000 of bonds for street paving; Mayor, J. H. Rivers. (Recently mentioned.)

Montgomery, Ala.—Board of Revenue of Montgomery County is considering plans for further improvement of roads, disposing of the proceeds of a \$250,000 bond issue. Contracts amounting to \$60,000, previously referred to, have already been awarded.

Oklahoma City, Okla.—City Council has authorized paving plans and specifications for 14 blocks of paving on 6th street, Grand, Lee and California avenues. Contracts will be let about January 1. (The paving of 16 streets was recently referred to.)

Palmetto, Fla.—City is reported as having voted \$11,000 of bonds for street paving. Address The Mayor.

Rockingham, N. C.—Furman & Odeon will build concrete-block plant and have begun laying cement pavements in business section.

### SEWER CONSTRUCTION

Baltimore, Md.—Forestglen Land Co., Chas. F. Behrens, manager, 961 Calvert Building, will construct sanitary sewerage system for 900 double houses to be erected in suburbs of Baltimore. (See "Machinery Wanted.")

Blue Ridge, Ga.—City has voted \$8000 of bonds for construction of sewerage system. Address The Mayor. (Mentioned in October.)

Cameron, Texas.—City contemplates constructing sewerage system, and has engaged civil engineer to make surveys. Address The Mayor.

Lexington, Ky.—Central Construction Co. is having bidder and will probably be awarded contract for construction of sanitary sewer on West 6th street.

Memphis, Tenn.—City will install about 450 feet storm-sewer pipe in connection with improvements to Laclede avenue. J. H. Weatherford, city engineer, is in charge. (See item under "Road and Street Improvements.")

New Orleans, La.—Sewerage and Water Board has apportioned \$240,000 out of public improvement fund for completing contracts and prosecuting work on unlined canals, etc., in connection with drainage system. Resolution has been adopted; Mr. Behrman, Mayor.

Norfolk, Va.—Local Board of Improvements of Seventh Ward has awarded contract to Duffy & Co. at \$34,075 to lay lateral sewerage system requiring 1000 linear feet of 10-inch

terra-cotta pipe, 24,000 linear feet 8-inch terra-cotta pipe, 24,000 linear feet of 4-inch terra-cotta house connections, 50 manholes and 35 flush tanks. Bryan & Co. have contract for laying the main pipes of the sewer system, costing about \$68,000, which will be completed in January. In addition to these expenditures the ward will expend \$15,000 for water-pipe system for sewer-flushing purposes, \$5000 for real estate in connection, including pumping station sites, and about \$6000 for incidentals. A bond issue of \$140,000 has been authorized. (Recently mentioned.)

Pawhuska, Okla.—W. W. Cook & Sons, Muskogee, Okla., are reported as having contract to construct sewer system, water-works and electric plant at Pawhuska; cost about \$100,000.

Stillwater, Okla.—City has temporarily postponed election for issuance of \$60,000 of bonds for sewerage and water-works extension; Mayor, John Bishop. (Recently mentioned.)

### TEXTILE MILLS

Ardmore, Okla.—Cotton Mill.—S. T. Riedsue, H. G. Spaulding and others propose organizing a company with capital stock of \$200,000 to build cotton mill.

Atlanta, Ga.—Cotton-duck Mill.—National Duck Mills, previously reported incorporated, etc., has leased plant already constructed at cost of over \$100,000; will begin operations with 76 looms, making numbered duck in different widths; daily output, 6000 pounds; will not spin, but purchase yarns in market; George P. Howard, president, Simpson and Lambert streets. (See "Machinery Wanted.")

Charlottesville, Va.—Silk Mill.—Frederick H. E. Motherer is reported as to establish silk mill to be managed by Fred K. Ott of Bethlehem, Pa.

Chattanooga, Tenn.—Cotton Cloth Mill.—Wachovia Mills, W. I. Young, general manager, is reported to have had plans prepared for erection of proposed cotton cloth mill, to be equipped with 100,000 spindles and 3500 looms. This company was incorporated last year and again mentioned in the Manufacturers' Record of August 8 as planning to proceed with construction of the plant.

Cheraw, S. C.—Cotton-cloth Mill.—Cheraw Cotton Mills, recently reported incorporated to build plant of 10,000 spindles and 300 looms, has organized with election of James Dillingham of 256 Church street, New York, as president, and A. G. Kollock of Darlington, S. C., treasurer and manager. Will probably use electricity for motive power and possibly steam power. J. E. Shirrine of Greenville, S. C., is engineer in charge.

Coolseeme, N. C.—Cotton Mill.—Coolseeme Cotton Mills is reported as now proceeding with construction of proposed addition, which will be equipped with some thousands of spindles. Present equipment, 40,000 spindles and 1296 looms.

Huntsville, Ala.—Cotton Mill.—Capitalists have arranged to organize company capitalized at \$250,000 for the erection of cotton mill. Names and addresses not authorized for publication.

New Orleans, La.—Moss and Cotton Felt Mill.—Kohlmann Moss & Cotton Felt Manufacturing Co. incorporated with capital stock of \$15,000 to manufacture moss and cotton felt and batting by Louis Kohlmann and others.

Paducah, Ky.—Hosiery Mill.—Wisdom Hosiery Co. will take over and operate the Dixie Mills Company, with 150 knitting machines and accompanying machinery. It is reported as proposing to double this equipment. The company was mentioned last week as incorporated with capital stock of \$150,000. Robert B. Phillips is secretary.

Radford, Va.—Hosiery Mill.—Radford Knitting Mills has completed installation of plant, previously detailed, and contemplate adding 50 knitting machines; present equipment, 100 machines.

Rock Hill, S. C.—Cotton-yarn and Pad Mill.—Harris Manufacturing Co. will soon complete mill previously detailed; building is two stories high, 75x140 feet, costing about \$12,000; it will be equipped with heavy spindles for daily output of 200,000 pounds of coarse yarns,  $\frac{1}{8}$  to 8s. This machinery will cost about \$30,000, and is being furnished by Lowell Machine Shop of Lowell, Mass. Department for making collar pads will be included in mill. Wm. H. Harris, company's president, is also architect and engineer in charge.

Rome, Ga.—Cotton Cloth Mill.—Silver Creek Milling Co., incorporated with capital stock of \$40,000 and privilege of increasing to \$250,000, by E. A. Greene, H. A. Dean and Ed Dean, to build cotton cloth mill.

### WATER-WORKS

Baltimore, Md.—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, will construct waterworks to supply 900 double houses in suburbs of Baltimore. (See Machinery Wanted.)

Blue Ridge, Ga.—City has voted \$14,000 of bonds for construction of water-works. Address The Mayor. (Mentioned in October.)

Childress, Texas.—City will construct water-works. Plans and specifications are invited; Joseph H. Aynesworth, City Clerk.

Cleburne, Texas.—Cleburne Land Co., recently reported incorporated with \$50,000 capital stock, will install private water system; manager, F. L. Deal; secretary, J. W. Reavley.

Fort Barrancas, Fla.—Joseph L. Swiegrad has contract at \$7830 for furnishing additional machinery in pump-house and extending water system.

Macon, Ga.—Central of Georgia Railway, C. K. Lawrence, chief engineer, Savannah, Ga., will construct water plant for its new shops, investing about \$30,000. About one mile of piping will be laid. Steel sections of the line will be 12 feet long and 16 inches in diameter on inside. It is planned to build at the river bank a dry well constructed of brick, 30 feet deep and about 30 feet square, in which the pumping apparatus will be installed. Machinery will be operated by a motor, power to be furnished by company's new power-house. A 50,000-gallon tank will be built at the shops and later a reservoir will be constructed, together with filtering plant and settling basin. Construction work will soon begin.

McAlester, Okla.—City will construct second dam at water shed for doubling water supply. Address the Mayor.

Palmetto, Fla.—Reported that city has voted \$10,000 of water-works bond. Address The Mayor.

Pawhuska, Okla.—Reported that W. W. Cook & Sons, Muskogee, Okla., have contract at about \$100,000 for constructing water-works, sewer system and electric plant at Pawhuska.

Rockingham, N. C.—City contemplates constructing water-works. Address The Mayor.

Stillwater, Okla.—City has temporarily postponed election recently noted to be held on December 3 for issuance of \$60,000 of bonds for water-works extension and sewerage; John Bishop, Mayor.

### WOODWORKING PLANTS

Arkadelphia, Ark.—Poles and Shafts.—Pioneer Pole & Shaft Co. will rebuild plant recently burned at a loss of \$12,000.

Athens, Tenn.—Hardware and Furniture.—Etowah Hardware & Furniture Co. incorporated with \$5000 capital stock by M. D. West, C. A. Webb, J. C. Williams and others.

Bluff Springs, Fla.—Escambia Veneer Co. incorporated with \$6000 capital stock; P. C. Hecker, president, and A. C. Turner, secretary-treasurer.

Bristol, Tenn.—Furniture.—Koresnan Unity (co-operative), A. G. Ordway, president, recently noted to have purchased the Ordway plant, will probably install machinery to amount of \$3000 to \$5000 for manufacture of furniture and wood specialties; manager, E. B. Webster; engineer in charge, Charles J. Raby. Company will erect houses for operatives as per item under "Dwellings." (See "Machinery Wanted.")

Carthage, Mo.—Spring Beds.—Carthage Superior Spring Bed Manufacturing Co. incorporated with \$60,000 capital stock by A. M. Beymer, J. E. Bell, A. L. Olive and others.

Chattanooga, Tenn.—Furniture.—Rhodes-Haverty Furniture Co. incorporated with \$15,000 capital stock by A. G. Rhodes, J. J. Haverty, F. E. Mahoney and others.

Dallas, Texas.—Boxes, etc.—Reported that Armour & Co., Chicago, Ill., will build plant near Dallas for manufacturing boxes, barrels, etc.

Decatur, Ala.—Headings.—Reported that N. B. Hall & Sons will erect plant for manufacturing slack-barrel headings on site of basket factory, recently reported burned at a loss of about \$50,000.

Dermott, Ark.—Staves.—Reported that Geo. J. Miller, Sunman, Ind., representing the Ohio Stave & Timber Co., Louisville, Ky., is considering establishment of stave factory.

Greenville, N. C.—Furniture Veneers.—Cabnet Veneer Co. will establish plant for manufacturing furniture veneers and operate sawmill in connection. R. J. Cobb and others are interested.

Hartsville, S. C.—Chairs.—Reported that Mr. Tipton, Union City, Pa., contemplates establishing chair factory in Hartsville.



Kansas City, Mo.—Woodenware.—Avery-Sholars Woodenware Co. incorporated with \$3000 capital stock by C. H. Avery, F. M. Avery, W. W. Avery and others.

Kinston, N. C.—Shingle Mill.—Parrott & Crabtree will establish shingle mill in connection with sawmill now being erected; machinery will be installed. (See "Machinery Wanted.")

Marshall, Texas.—Excelsior.—Texas Excelsior Manufacturing Co. organized to establish excelsior factory; W. H. Sedberry, manager. Company will erect frame building, 20x70 feet, with galvanized corrugated roof; will also build dry sheds; cost of buildings and machinery about \$4500; daily capacity five to six tons pine and cottonwood excelsior. (See "Machinery Wanted.")

Memphis, Tenn.—Furniture.—Eagle Furniture Co. incorporated with \$15,000 capital stock by J. J. Haverly, David Lee, A. D. Patton and others.

Mobile, Ala.—Lath and Shingle Mill.—David E. Sayre will erect lath and shingle mill recently mentioned; 24x72 feet; 16 feet high; cost of building and machinery approximately \$5000; capacity about 80,000 lath and 50,000 shingles per day; manager, David E. Sayre. (See "Machinery Wanted.")

Norfolk, Va.—Box Shooks.—Wm. E. Uptegrove & Bros., New York, N. Y., will not establish plant to manufacture box shooks; recently incorrectly reported.

Oklahoma City, Okla.—Carriage Factory.—Oklahoma Carriage Co., 314 West California street, will build factory for manufacturing transfer and livery equipment. Building will be 75x130 feet; two stories; brick or concrete; cost \$20,000.

Orange, Texas.—Boxes, etc.—Sam J. Smith, Waco, Texas, recently mentioned as having purchased the Orange Crate & Manufacturing Co.'s box and crate factory and to install additional machinery, will manufacture two cars of boxes daily. Plant will be operated as the Orange Chair & Manufacturing Co., and later will make chairs, veneers of various kinds and common furniture.

Orangeburg, S. C.—Buggy Shafts, etc.—S. H. Crum contemplates the manufacture of buggy shafts, singletrees, etc. (See "Machinery Wanted.")

Rector, Ark.—Handles and Heading.—Eagle Handle & Heading Co., recently reported to establish handle factory, will erect building, 70x104 feet, and install machinery at cost of \$5000; will manufacture ash handles and slack barrel heading. (See "Machinery Wanted.")

Vicksburg, Miss.—Oars.—Reported that A. F. Shaffer, formerly of Indiana, will soon begin grading site and award contract for proposed oar factory to have an annual capacity of about 1,000,000 feet of ash timber. (Mentioned in September.)

## BURNED

Anniston, Ala.—Bell & Weatherly Company's building; loss on structure, \$15,000.

Arkadelphia, Ark.—Pioneer Pole & Shaft Co.'s plant; loss \$12,000.

Carrollton, Ky.—Carrollton Democrat Publishing Co.'s plant; loss \$5000; E. C. Smith, editor.

Charlottesville, Va.—Jefferson Auditorium; loss about \$35,000.

Coaldale, Ark.—Travis Mill Co.'s shingle mill.

Covington, La.—St. Joseph's Academy, St. Joseph's Monastery and St. Joseph's Catholic Church; total loss about \$100,000.

Greenville, S. C.—Southern Railway Co.'s freight depot; loss \$6000; D. W. Lum, chief engineer, Washington, D. C.

Henderson, Ky.—Mrs. E. G. Sebree's residence; estimated loss \$10,000.

Langston, Okla.—Negro Agricultural and Normal University's main building; loss \$22,000; Inman E. Page, president.

Louisville, Ky.—H. Wedekind Grocery Co.'s building, owned by Mrs. Mary Wedekind; loss on structure, \$15,000.

Louisville, Ky.—Pilscher Organ Co.'s plant damaged; loss about \$12,000.

Montbrook, Fla.—Florida Lumber Co.'s mill; loss \$35,000.

Pangburn, Ark.—Farmers' Union cotton gin.

Pocahontas, Ark.—Roberts Cotton Oil Co.'s cotton gin and warehouse; loss \$9000.

Providence, Okla.—W. M. Foster's cotton gin; loss \$3000.

Tecumseh, Okla.—Chicago, Rock Island & Pacific Railway Co.'s depot; loss \$3,000. J. B. Berry, chief engineer, Chicago, Ill.

Tifton, Ga.—Preston Whaley's sawmill.

## BUILDING NOTES

\* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

### APARTMENT-HOUSES

Jacksonville, Fla.—Brinkly & Baines are having plans prepared by W. B. Camp, 20 Main street, for erection of apartment building; three stories, 46x80 feet; brick, sand and limestone; six apartments; electric lighting; cost \$15,000; owners having work done by day labor.

Jacksonville, Fla.—A. Ritzewoller has engaged W. B. Camp, 20 Main street, to prepare plans for three-story apartment-house; 88x52.6 feet; six apartments; gas heating and fireplaces; tile; marble; electric lighting; cost \$18,000; bids to be opened about December 25.

Nashville, Tenn.—George W. Wilson, Cincinnati, Ohio, has had plans prepared by Werner & Adkins, Cincinnati, Ohio, for erection of apartment-house in Nashville to be known as Elliston Court; eight stories; triangular in shape; cost \$250,000.

Richmond, Va.—W. F. Drinkard will erect brick apartment-house to cost \$6500.

St. Louis, Mo.—Lelsner Realty & Building Co. will erect double apartment-house; 34x49 feet; brick and stone. Plans have been prepared.

St. Louis, Mo.—J. F. Cornwell & Sons, architects, 717 Chestnut street, have prepared plans and will erect for themselves five brick and stone apartment-houses at a cost of \$25,000.

St. Louis, Mo.—J. D. Paulus, Laclede Building, is preparing plans for double apartment-house; two stories; brick and stone.

St. Louis, Mo.—Freund Bros. Realty Co. will erect two-story apartment-house at a cost of \$7800.

St. Louis, Mo.—J. R. O'Hearn will erect five two-story apartment-houses at a cost of \$16,250.

Washington, D. C.—George E. Phillips, 514 14th street N. E., will erect three-story brick store and apartment-house, 20x60 feet, on I street, between 2d and 3d streets N. E., to cost \$6000; Merrill T. Vaughn, architect, 627 F street N. W.

Washington, D. C.—Harry Wardman, builder, 1333 G street N. W., will erect 10 apartment-houses at 14th and Clifton streets; three stories; brick with stone trimmings; modern conveniences; cost about \$300,000; A. H. Beers, architect, 1333 G street N. W.

### BANK AND OFFICE BUILDINGS

Kansas City, Mo.—Mrs. Henrietta B. Green is having plans prepared by Albert S. Owen, Scarritt Building, for erection of office building; five stories; brick, stone and terra-cotta; cost \$60,000.

Mount Pleasant, Texas.—Merchants and Planters' National Bank has not completed plans for erection of bank building recently mentioned; architect not named; as proposed, building will be one-story brick, with stone front; about 25x120 feet; hot-air or steam heat; electric lighting; cost \$5000 to \$6000.

Springfield, Ga.—Exchange Bank of Springfield, C. F. Berry, president, will erect bank building.

### CHURCHES

Birmingham, Ala.—Vine Street Presbyterian congregation has had plans prepared by William Ernest Spink for erection of edifice; brick and stone; slate roof.

Bishopville, S. C.—Presbyterian congregation has appointed building committee, consisting of Rev. Hugh R. Murchison, C. L. Massey and others, to secure plans and specifications for erection of edifice.

El Paso, Texas.—Church of the Guardian Angel will erect edifice; brick; 45x127x30 feet; cost \$16,000. Address The Pastor, Church of the Guardian Angel.

Enterprise, Ala.—Baptist congregation has not let contract for erection of edifice recently mentioned; plans by LaBelle-Kriss Company, Title Guarantee Building, Birmingham, Ala.; 96x90 feet; temple style; hot-air heating; electric lighting; cost \$16,000; pastor, A. G. Moseley.

Farmington, Mo.—Evangelical congregation will erect edifice, for which Charles F. May, Laclede Building, St. Louis, Mo., was mentioned in October as preparing plans; 51x78 feet; gas and electricity; cost \$25,000.

Greenwood, Miss.—First Baptist Church will erect edifice; F. M. Aldridge, chairman building committee.

New Orleans, La.—Contractors are invited to submit bids until December 12 for erection of Touro Synagogue according to plans by Emile & Weil, Hibernia Building. Structure will be 85x160 feet; pressed brick; tiled roof on dome, with terra-cotta trimmings; floor of lobby to be tiled, with marble base around walls; hot-air heating, fan-driven; estimated cost \$100,000. Contract calls for completion of the building not later than September 1. (Mentioned in August.)

Newport News, Va.—Building committee of Hebrew Congregation of B'nai Israel will open bids December 2 for erection of synagogue; plans and specifications on file at the Big Six Store, 13 West Queen street; usual rights reserved; L. Hurwitz, Joe Gold and W. H. Rapeport, building committee.

Richmond, Va.—Asbury M. E. Church will erect edifice; P. C. Traylor, chairman Board of Stewards.

Somerset, Ky.—Methodist Congregation will erect concrete edifice. John Brashears, James Mason and J. T. Chenault, building committee.

Spartanburg, S. C.—Macedonia Baptist Congregation, Rev. J. W. Leek, pastor, has had plans prepared for erection of edifice to cost \$3000.

St. Louis, Mo.—Church of the Ascension has not announced date of opening bids for erection of church edifice recently noted; plans by Mariner & LeBeaume, Chemical Building; 50x125 feet; steam heat; electric lighting; cost \$55,000.

St. Louis, Mo.—Theo. W. Paschedag, 3513 University street, awarded contract to F. W. Matthes for erection of funeral chapel; 90x42½ feet; hot-air heating; gas and electric lighting; plans by E. Preisler, 918 Pine street; cost \$5000.

Wylieville, Va.—Vestry of St. John's Church will probably let contract about February 1 for remodeling of edifice recently mentioned; plans by A. H. Eliwood & Sons, Elkhart, Ind.; to have steam, hot-water or hot-air heating; lighting not decided; seating capacity 400; W. H. K. Pendleton, rector.

### COURTHOUSES

Canyon, Texas.—Randall county has not yet engaged architect to prepare plans for courthouse recently noted to be erected when bonds are voted; as proposed, building will be of brick or stone, with electric lighting; cost \$50,000; supplies will be wanted, including furniture; A. N. Henson is county judge; vote on bond issue to be held December 14. Address County Commissioners.

Fitzgerald, Ga.—Ben Hill county will vote December 20 on issuance of \$65,000 of bonds for erection of courthouse. Address County Commissioners.

New Orleans, La.—Architects are invited to submit competitive plans until December 18 at office of James Knox Taylor, supervising architect, Washington, D. C., for erection of United States postoffice and courthouse in New Orleans, to cost not more than \$1,200,000, exclusive of lighting fixtures, both gas and electric, and mural paintings. Main street floor to contain not less than 50,000 to 55,000 square feet, and accommodate several divisions of the postoffice, mechanical plant, etc.; second floor to contain about 35,000 square feet and be used mainly for United States courts. Commission of Award is composed of James Knox Taylor, supervising architect, and James Rush Marshall, 1516 H street, both of Washington, D. C., and Arnold Brunner and William Martin Allen, both of 33 Union Square West, New York city. Address Mr. Taylor.

### DWELLINGS

Baltimore, Md.—Joshua E. Franklin, builder, Culver avenue, near Grindin lane, will erect 11 two-story brick dwellings on Payson and Franklin streets to cost about \$28,000.

Baltimore, Md.—Forest Glen Land Co., Forest avenue, Forest Park, has commissioned J. Edward Laferty, architect, 11 East Pleasant street, to prepare plans and specifications for 900 double dwellings to be erected on 140-acre tract of land in suburbs of Baltimore. Dwellings will be constructed of concrete blocks and contain all modern conveniences. Officers of company are B. Wood Burch, president, and B. Guy Cochran, secretary and treasurer.

Baltimore, Md.—Forest Glen Land Co., 961 Calvert Building, will develop 1½ acres of land in suburbs of Baltimore and erect 900 twin two and three-story concrete block dwellings. Houses will be equipped with gas and electric fixtures and cost \$4500 each. Central electric-light and heating plant, water-works, sanitary sewerage system and macadam roadways will be constructed; J. Edward Laferty, architect, 11 East Pleasant

street. Officers of company are B. Wood Burch, president; Robert Burton, vice-president, and R. Guy Cochran, secretary and treasurer, and Charles F. Behrens, manager. (See "Machinery Wanted.")

Baltimore, Md.—Harvey Coale of Crown Cork & Seal Co., Guilford avenue and Oliver street, has awarded contract to J. J. Walsh & Son, 1525 Maryland avenue, for construction of two-and-one-half-story frame dwelling 32x40 feet, with electric wiring and fixtures, sanitary plumbing and steam-heating system, at Roland Park; C. M. Anderson, architect, 324 North Charles street.

Barnesville, Ga.—J. F. Hooten awarded contract to Turner & Prout for erection of \$5000 dwelling; two stories; 10 rooms; electric lighting; plans by Alexander Blair, Macon, Ga.

Bristol, Tenn.—Korehan Unity (co-operative) contemplates expenditure of from \$10,000 to \$20,000 in erection of small dwellings during the coming year; architect, Steve Chislett, care of Korehan Unity.

Charlotte, N. C.—E. R. Mason will erect residence on Elizabeth Heights.

Ft. Thomas, Ky.—Mrs. J. M. Arnold will erect residence recently mentioned; brick; colonial style; hot-water heating; electric lighting; cost \$7000; plans by C. C. & E. A. Weber, Cincinnati, Ohio.

Hattiesburg, Miss.—Mrs. E. Mosele will erect dwelling and store building.

Jacksonville, Fla.—Thomas Fowler will erect residence; plans by W. B. Camp, 20 Main street; two-story building, 24x40 feet; fireplaces; electric lighting; cost \$3000; bids to be opened December 15. (See "Machinery Wanted.")

Kansas City, Mo.—Hainer Realty Co., Shukert Building, will erect four two-story stone-veneered residences. Plans have been prepared.

Knoxville, Tenn.—Joseph Szabo has awarded contract to L. A. Galyon for erection of residence; site 85x150 feet; brick; marble finish; colonial style of architecture; interior hardwood finishings; cost \$15,000. Barber & Klutz have prepared plans.

Salem, Va.—H. M. Miller, Rooms 5 and 6 Southwest Virginia Trust Building, Roanoke, Va., is preparing plans for residence for Rev. E. W. Hubbard; building to be brick veneered; slate roof; hot-water heating; electric lighting; plumbing; cost \$7000.

Savannah, Ga.—E. B. Lane has awarded contract to Raby & Bragdon of brick residence.

Savannah, Ga.—Wright Hunter has purchased site, 62x12½ feet, on which to erect residence.

Savannah, Ga.—J. B. Chestnutt, Savannah, Ga., has had plans prepared by H. W. Witcover, National Bank Building, Savannah, Ga., for erection of bungalow at Montgomery; two stories; colonial style; roofed with shingles; bathrooms, etc.

St. Petersburg, Fla.—Bayshore Land Co. has awarded contract to G. F. Richardson for erection of bungalow.

St. Louis, Mo.—John C. Roberts will erect residence on site 151x247 feet.

St. Louis, Mo.—A. B. Finch will erect six one-story dwellings to cost \$32,000.

St. Louis, Mo.—George Trautwein will erect two-story store and dwellings at a cost of \$5000.

St. Louis, Mo.—U. Mark Realty Co., Wainwright Building, will erect seven cottages; 23x46 feet; brick and stone; cost \$30,000; plans by H. G. Clymer, Wainwright Building.

St. Louis, Mo.—O. R. S. Traber, Fullerton Building, is preparing plans for brick and stone residence in the West End to cost about \$10,000.

St. Louis, Mo.—A. A. Fischer Realty Co. will build residences, for which permit was recently noted granted to A. A. Fischer Architectural & Building Co.; five residences to be 24x35 feet and one 26x30 feet; buildings to have hot-air heating; gas and electric lighting; cost \$5000 each; plans and construction by A. A. Fischer Architectural & Building Co., Liggett Building, 728-730 Chestnut street.

Tuscaloosa, Ala.—Mr. Williams has had plans prepared by Wm. Ernest Spink, Birmingham, Ala., for erection of concrete-block residence.

### HOTELS

Charleston, W. Va.—F. Bernarding and J. A. Butler will erect hotel; three stories; concrete blocks; 40 rooms.

Cliffside, N. C.—R. R. Haynes is promoting erection of hotel.

Glidden, Texas.—Galveston, Harrisburg & San Antonio Railway is reported to build hotel. Alvin Anderson will be manager.

Lafayette, La.—Gordon Hotel Co. will erect

additional story to present three-story structure.

Oberlin, La.—Constant Sannier will erect proposed two-story hotel; 32x52 feet; 17 rooms; cost \$3000; Lee Warren, architect and contractor.

Silsbee, Texas.—Gulf, Colorado & Santa Fe Railway, C. F. W. Felt, chief engineer, Galveston, Texas, will erect three-story hotel at Silsbee to cost about \$75,000. Bids are now invited.

Tomball (not a postoffice), Texas.—J. Oppenheim, Houston, Texas, will erect two-story brick hotel and store building at Tomball.

Tullahoma, Tenn.—Reported that Donk Aydelott and associates will erect hotel; hollow-concrete blocks and brick; hardwood finishings; two and one-half stories high, not including basements.

### MISCELLANEOUS STRUCTURES

Austin, Texas.—Asylum.—Bids will be opened December 5 for erection of addition to State Lunatic Asylum of Austin. Bids to be accompanied by certified check, payable to F. T. Ramsey, president board of managers. Plans can be seen or applied for at office of C. H. Page, Jr., & Bro., architects, Austin.

Berkley, Va.—Store Building.—A. J. Sugar will erect three-story brick store building.

Birmingham, Ala.—Jail.—Jefferson county awarded contract to Evans Bros. Construction Co. for improvements to jail recently mentioned; plans by La Belle-Kribs Company; building to have steam heat and electric lighting; John T. Reed, president Board of Revenue.

Birmingham, Ala.—Store Building.—Kerner-Williams Shoe Co. will remodel \$5000 store building; plans by William Ernest Spink, 812 Title Guarantee Building; completed structure to be 40x50 feet; to have steam heat and electric lighting; date of opening bids not set.

Burrwood, La.—Foundations and Wharf.—Christie & Lowe are lowest bidders at \$17,000 for constructing wharf and building foundations for buildings, walks, etc., at Burrwood at Southwest Pass. United States engineers will recommend that all bids be rejected.

Charlotte, N. C.—Garage.—Dr. Charles L. Alexander will have plans prepared by Hook & Rogers for three-story garage; to be equipped with elevator, turntables, etc. Garage will be leased by Armistead Burwell Motor Co.

Columbia, S. C.—Hospital.—Columbia Hospital of Richland County contemplates erecting surgical and medical building, for which it is negotiating a loan of \$30,000, as recently mentioned. Structure will be two stories and basement; brick; tiled roof; electric elevator; first floor will be devoted to female patients; medical ward will contain 13 cots and surgical ward 17; each ward will have bath, sun parlor, etc.; three private or isolating wards of two beds each; second floor will be used for male patients and be similarly arranged; building will have steam heat and electric and gas lighting; electrical elevator will be installed; architects, Shand & LaFaye, Columbia, S. C.

Columbus, Ga.—Car Barn.—Columbus Railroad Co. has had plans prepared for erection of car barn, which will contain reading and club rooms, shower-baths, etc.

Columbia, S. C.—Infirmary.—University of South Carolina will erect the Wallace Thompson Memorial Infirmary; one story; brick; tiled roof; medical ward to contain 12 beds; contagious ward, six; in rear of each ward is octagonal toilet tower, containing bathrooms, etc.; direct-indirect steam heat; ventilating ducts will be provided; in front will be covered veranda and in rear paved open terrace; cost \$15,000; Shand & LaFaye, architects.

Fitzgerald, Ga.—Jail.—Ben Hill county will vote December 20 on issuance of \$15,000 of bonds for erection of jail. Address County Commissioners.

Hampton, Va.—Store Building.—Mrs. Anna E. Schermerhorn awarded contract to C. T. Holtzclaw for erection of store building; press-brick front; cost \$3500.

Hawkinsville, Ga.—Store Building.—J. P. Watson will rebuild store building recently reported burned; J. C. Ridley, occupant; 20x50 feet; brick; electric lighting; contractor, J. L. Huggins.

Kansas City, Mo.—Business Building.—Clifton B. Sloan, architect, 515 and 516 Hall Building, awarded contract to Frank Cudworth, Kansas City Life Building, for erection of business structure recently mentioned; planned by owner; 82x66 feet; two stories and basement; designed to carry two extra stories; reinforced concrete; steam

heat; electric and gas lighting; cost \$30,000.

Memphis, Tenn.—Store Building.—Mrs. Ida Stewart will erect store building; three stories; brick and stone; cost \$14,000; Emmons & Co., contractors.

Oklahoma City, Okla.—Library.—Fay M. Upson, secretary Carnegie Library Board, invites architects to submit plans and specifications until January 3 for erection of addition to Carnegie Library to cost about \$25,000. (Recently mentioned.)

Portsmouth, Va.—Naval Hospital.—Wood, Donn & Deming, architects, 808 17th street N. W., Washington, D. C. (temporary offices at Portsmouth), are supervising remodeling of United States Naval Hospital at Portsmouth, for which \$200,000 is now available. Improvements include new interior, floors, ceilings, partitions, etc.; steel beams and terra-cotta arches; operating pavilion reached by two electric elevators; plumbing; sewerage system; electric lighting; heating system and new power-house, containing laundry. Building will be fireproof and have capacity of 500 patients. It is expected that an additional \$75,000 will be available later with which to erect two wings.

Portsmouth, Va.—Government Building.—Contract awarded to R. H. Richardson & Son, Hampton, Va., for erection of post-office and custom-house recently mentioned; fireproof construction; 61x84 feet; hot-water heating; electric lighting; cost \$65,000.

St. Louis, Mo.—Mercantile Building.—Aberdeen Investment Co. has had plans prepared by Isaac S. Taylor, Mercantile Building, for erection of store building; six stories; 100x90 feet; gas and electricity; cost \$150,000. (Recently mentioned.)

St. Louis County, Mo.—Summer Garden.—R. D. Weakley, Missouri Trust Building, St. Louis, Mo., is preparing plans for summer garden to cost about \$50,000.

St. Louis, Mo.—Restaurant.—Calumet Catering Co., Victoria Building, has had plans prepared by Charles H. Dietering for remodeling basement-room in the Pierce Building as lunchroom; fireproof tile partitions; interior marble and tile; electric fans; cost \$15,000.

Washington, D. C.—Store Buildings.—A. H. Beers, architect, 1333 G street N. W., is preparing plans for store and office building to be erected on F street and extending through to G street N. W.; three stories; 60 feet front on each street; brick with stone trimmings; structural iron and steel; tile roofs; marble and mosaic work.

Washington, D. C.—Laboratory.—James Knox Taylor, supervising architect, Treasury Building, will receive sealed proposals until January 7 for construction (including plumbing, heating apparatus, electric wiring and conduits) of an extension to and remodeling of Hygiene Laboratory of the United States Marine Hospital Service. Plans and specifications can be obtained from above address.

### MUNICIPAL BUILDINGS

Dallas, Texas.—Greenhouse.—J. E. Flanders will prepare plans and specifications and upon completion of same advertise for bids for erection of greenhouse, 40x75 feet, at City Park; W. R. Tietze, park superintendent.

Little Rock, Ark.—Convention Hall and Market-house.—City has indefinitely postponed proposition to erect convention hall and market-house recently mentioned.

New Orleans, La.—City Hall.—Jefferson Construction Co. is lowest bidder for erection of City Hall Annex at \$288,000, and \$5000 additional for elevator. City Engineer has recommended acceptance of the bid.

San Angelo, Texas.—Fire Station.—City will vote December 19 on issuance of \$18,000 of bonds for erection of firehouse. Address The Mayor.

### RAILWAY STATIONS

Easley, S. C.—Southern Railroad Co., D. W. Lum, chief engineer, Washington, D. C., awarded contract to J. F. Gallivan Building Co., Realty Building, Greenville, S. C., for erection of passenger and freight depot recently mentioned.

Spencer, N. C.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., is reported to build passenger station in Spencer.

Whaleysville, Md.—Baltimore, Chesapeake & Atlantic Railway, A. C. Shand, chief engineer, Philadelphia, Pa., is to build new stations at Whaleysville, Reids Grove and Berlin, Md.

### SCHOOLS

Atlanta, Ga.—City will open bids December 15 for erection of Fifth ward school building recently described; plans by Harrison Bleckley, 619 Empire Building; cost \$80,000 to \$70,

000; slow-burning construction; steam-blower heating system; electric lighting; size, 65x173 feet.

Bamberg, S. C.—Shand & LaFaye, 1328 Main street, Columbia, S. C., will prepare plans for school building at Bamberg to replace structure recently reported burned. New building will contain 10 rooms and auditorium, and cost about \$15,000.

Brunswick, Ga.—Committee appointed by Board of Education to make preliminary plans for high school will be ready to submit same to architects on December 12. W. S. Ballard may be addressed. (Mentioned recently.)

Columbia, S. C.—Winthrop College, M. R. Johnson, president, will petition Legislature for an additional appropriation of \$60,000 for new dormitory to accommodate about 300.

Cotulla, Texas.—Commissioners' Court of LaSalle county has ordered that \$5000 of bonds for erection of school building, authorized by election, be issued.

Erwin, Tenn.—Unaka Academy has not engaged architect to prepare plans for two buildings recently noted to be erected at cost of \$10,000. School building is to contain six or seven rooms; boarding hall, about 30; heating, lighting, etc., not determined; A. R. Brown, president board of trustees.

Fort Worth, Texas.—School Board will erect school building in North Fort Worth; about 10 rooms and basement; brick; cost about \$15,000; T. B. Littlepage and James D. Farmer, committee in charge.

Greensboro, N. C.—Executive committee of State Normal and Industrial College has employed Hook & Rogers, Charlotte, N. C., to prepare plans and specifications for science building to be erected at cost of \$100,000; contract to be awarded as soon as plans are completed. Address architects or J. I. Foust, president.

Richmond, Va.—Contract will be awarded December 26 for erection of school building according to plans and specifications by Charles K. Bryant, 104 E. Main street, from whom copies of same can be obtained. Usual rights reserved. Bond for 25 per cent. of amount of contract. Bids to be addressed to chairman of School Board and left with Clerk C. P. Walford, City Hall.

San Marcos, Texas.—State Normal School has awarded contract to Otto Birkner for erection of wing to science building, appropriation being \$10,000. Work will begin at once.

Sherman, Texas.—E. J. Belden has contract to erect school building at cost of about \$50,000.

Tulsa, Okla.—Henry Kendall College will have plans prepared by William A. Cann, Missouri Trust Building, St. Louis, Mo., for erection of college building; 122x65 feet; brick and stone; gas and electricity; steam heat; cost \$40,000. College was recently mentioned to expend about \$100,000 in erection of six buildings, including administration hall, two dormitories, dining hall and residences for president and dean.

Walterboro, S. C.—City contemplates voting on issuance of \$15,000 of school bonds. Address The Mayor.

Washington, D. C.—James M. Dunn, builder, 1324 5th street N. W., was lowest bidder at his bid of \$21,533 for construction of a four-room addition to Emery School at corner Lincoln avenue and Prospect street N. E. Work will be done under supervision of Inspector of Buildings Snowden Ashford, District Building.

Wauchoula, Fla.—City has voted \$15,000 of bonds for erection of high-school building; fireproof; two stories; 12 rooms; bids to be opened in March; architect not named; Y. E. Wright, trustee.

### THEATERS

Galveston, Texas.—J. Brand, New York, N. Y., is reported to build theater in Galveston; seating capacity, 1800; steam heat; electric lighting; electric fans; cost about \$12,000.

Lake Charles, La.—H. C. Stearn, Port Arthur, Texas is reported to build opera-house in Lake Charles.

Nevada, Mo.—John Tyler will erect two-story theater 56x106 feet at a cost of \$30,000; plans by Carl Boller, New Nelson Building, Kansas City, Mo.

Richmond, Va.—James Fox & Sons have contract to remodel store building on Broad street into vaudeville theater. I. Kast, Harrisburg, Va., is lessee and manager.

Savannah, Ga.—Reported that the Bijou Company (main offices, Richmond, Va.) will erect theater in Savannah; Jake Wells, president, and W. G. Neal, treasurer.

St. Louis, Mo.—German Theater Realty Co. has had plans prepared by Wildman &

Walsh, Wainwright Building, for erection of theater; three stories, 350x90 feet; cost \$100,000.

### WAREHOUSES

Bishopville, S. C.—Farmers' Union has selected Shand & LaFaye, 1328 Main street, Columbia, S. C., to prepare plans and supervise construction of cotton warehouse at Bishopville; capacity, 5000 bales; cost, \$15,000.

Booneville, Ark.—Farmers' Union Warehouse Co. incorporated with \$3000 capital stock; P. A. Sweeney, president; J. L. Sykes, vice-president; G. W. Burns, secretary, and J. E. Moffett, treasurer. (Booneville District Farmers' Union was reported in October to erect warehouse.)

Branford, Fla.—Branford Farmers' Union Warehouse & Ginning Co. incorporated with \$4000 capital stock; M. J. Sweat, president, and R. E. Langston, secretary.

Chatsworth, Ga.—Farmers' Union is erecting proposed warehouse.

Cushman, Ark.—Union Warehouse Co., recently reported incorporated, has erected its proposed fireproof warehouse, 80x100 feet.

Grapevine, Texas.—Farmers' Union Warehouse Co. incorporated by R. K. Gimes, J. P. Lowe and W. R. Buckner.

Gurdon, Ark.—Farmers' Union Warehouse Co. incorporated with \$25,000 capital stock; S. H. Hazlewood, president; T. B. McLaughlin, vice-president; S. K. Huffman, secretary, and J. B. Brown, treasurer.

Kansas City, Mo.—F. H. Thwing has had plans prepared by Charles A. Smith, Dwight Building, for erection of warehouse and factory building; three stories, 60x100 feet.

Kansas City, Mo.—Thomson Transfer Co. will erect three-story brick and reinforced-concrete warehouse. John W. McKechnie, New York Life Building, is preparing plans.

Mansfield, Ark.—Mansfield Farmers' Union Warehouse Co., recently noted incorporated, will erect \$4500 warehouse; 250x60 feet; iron-clad; fireproof; gas heating and lighting; plans by John F. Williams.

Memphis, Tenn.—C. K. J. Wagner has contract to erect two-story brick warehouse for Mrs. John A. Dennie; cost \$5200; W. B. Boone & Co., architects.

Memphis, Tenn.—Webb & Maury (Walter Webb and H. H. Maury) are having plans prepared by A. A. Chighizola for rebuilding warehouse, previously reported burned; three stories and basement; 45x117 feet; brick; mill construction; probable cost about \$17,500; offices at 90 Front street. (See item under "Miscellaneous Enterprises.")

Mt. Clam, Texas.—Farmers' Union will erect cotton warehouse 100x108 feet; brick foundation; iron walls.

St. Louis, Mo.—Lindell Real Estate Co. will build addition and alter warehouse at a cost of \$20,000.

Vian, Okla.—Allen & Mayer Bros. will rebuild cotton warehouse recently reported burned; will install Bluefield unloader.

### RAILROAD CONSTRUCTION

#### RAILWAYS

Abilene, Texas.—Morris R. Locke, president of the Colorado, Texas & New Mexico Railway Co., is reported as saying that construction is under way from Mangum, Okla., southward and is being pushed on toward Abilene, Texas. Line will run via Merkel and Llano, Texas.

Atlanta, Ga.—The Atlanta & Carolina Electric Railway Co., which has let contract to Cook & Laurie of Montgomery, Ala., to construct a line from Atlanta to Augusta, about 200 miles, has finished survey from Atlanta to Athens, Ga., and the remaining distance is to be surveyed immediately. J. W. English is president and Matthew Mason is vice-president and general manager, both at Atlanta.

Atoka, Okla.—The Missouri, Kansas & Texas Railway, which is building double track south of Atoka to Denison, Texas, will, it is reported, also begin double-tracking northward from Atoka to McAlester. S. B. Fisher is chief engineer at St. Louis.

Baltimore, Md.—The Canton Company, Walter B. Brooks, Jr., president, proposes to complete its railroad, which connects with the Pennsylvania Railroad near Bayview.

Burlington, N. C.—The Burghaw Traction Co. of Burlington has been chartered to operate a lighting plant and an electric railway in Burlington, Graham and Haw River, N. C.; capital \$350,000. The incorporators are Junius M. Harden, John N. Cook and J. W. Murray, who have subscribed to \$30,000 of stock.

Cambridge, Md.—Reported that Allen Travers Russell, 423 North Broadway, Baltimore,



contemplates building a railroad from Cambridge to Fox creek, all in Dorchester county. Gustave T. Bramble of Baltimore is also said to be interested.

Carrizo Springs, Texas.—The Neuces Valley, Rio Grande & Mexico Railway Co., capital \$250,000, which proposes to build a line from Carrizo Springs to Cotulla and other points in Texas, will, it is reported, shortly begin work. Directors have been elected thus: Asher Richardson of Oak Grove, president; J. T. Bivins of Pearsall, vice-president; Frank Fanning, second vice-president; S. D. Chamberlain, third vice-president and general manager; Felix Shaw, treasurer; T. E. George, secretary, all of San Antonio, Texas; W. W. McKinley of Pearsall, J. C. Penning of Temple and W. A. H. Miller of Cotulla, Texas.

Center, Texas.—Rights of way are being secured for the Center extension of the Gulf, Colorado & Santa Fe Railway. C. F. W. Feit is chief engineer at Galveston, Texas.

Center, Texas.—Reported that citizens have agreed to give right of way in and near Center to the Santa Fe to build a connecting line with the Texas & Gulf Railway; contract reported let to John Scott & Co. of Kansas City, Mo.

Central City, Ky.—The Kentucky Midland Railroad Co. is reported to have completed eight miles of grade from Central City toward Madisonville, 24 miles. A. B. Wood is contractor and M. M. Wheeler is chief engineer, both at Central City.

Charleston, S. C.—St. Julien Grimke, attorney for the Charleston-Summerville Electric Railway Co., is reported as saying that construction on the line will be resumed in a few days. A later report says that the company has been reorganized and the interests of Gen. A. J. Warner and Mr. Edwards have been purchased. Application has been made for an extension of the franchise in Charleston, as it will expire on December 28. W. O. Spriggs is mentioned as president, and F. S. Wright of New York is also said to be interested.

Chattanooga, Tenn.—Reported that the Queen & Crescent will shortly let contracts for two miles of double track to connect with the Stevenson extension of the Southern Railway. H. E. Warrington is chief engineer at Cincinnati, Ohio.

Columbia, Tenn.—The Tennessee Fertilizer Co. is reported to have practically completed a branch from Darks Mill, about one mile north of Columbia, to phosphate mines, and it will be operated about January 1.

Eldorado Springs, Mo.—The Eldorado Springs, Tiffin & Monegan Springs Electric Railway Co. is reported organized to connect the three points named. Dr. C. A. Edgar of Eldorado Springs is president; John Harrison of Tiffin, Mo., general manager.

Frederick, Md.—Survey will begin, it is reported, within a few days for the proposed electric railway from Frederick via Buckeystown, Poolesville and Seneca, Md., to Great Falls, to connect with the Old Dominion line to Washington, D. C. Theodore J. King, general manager of the Old Dominion Railway at Washington, is to direct the survey. Connection will be made at Frederick with the Washington, Frederick & Gettysburg Railway. D. Columbus Kemp, Joseph D. Baker and others of Frederick, Dr. Llewellyn Jordan, B. H. Warner and others of Washington are interested; line to be about 31 miles long.

Gainesville, Texas.—John King, vice-president and general manager of the Gainesville, Whitesboro & Sherman Interurban Electric Railway Co., is quoted as saying that work will be started within a few weeks and will be completed within a year.

Greenville, S. C.—The Greenville Interurban Railway Co. has begun survey for its line from Greenville to Williamston, and construction, it is said, will begin as soon as route is located. Lockwood, Green & Co. of Boston are the engineers. The following changes in officers are reported: John C. Carey, president, to succeed H. W. Prince, resigned; A. A. Gates, vice-president; H. H. Prince, general manager; C. C. Good, secretary and treasurer. The directors include the officers and Dr. George E. Coughlin of Anderson, S. C.; A. L. Scott of Lockwood, Green & Co., and B. A. Morgan of Greenville. It is further reported that the company proposes to continue the line from Williamston to Spartanburg.

Guthrie, Okla.—An officer of the Santa Fe system writes the Manufacturers' Record saying that he knows nothing of any purchase of the Guthrie, Fairview & Western Railroad by the Santa Fe. This denies a late press report.

Hartwell, Ga.—Survey for the Georgia-Carolina Railroad Co. from Anderson, S. C.,

to Athens, Ga., via Hartwell and other points, will, it is reported, begin immediately. Decamps & Cunningham of Anderson, S. C., and the Richardson-Wey Engineering Co. of Atlanta, Ga., are to make the survey. W. L. Hodges of Hartwell, Ga., is president of the road, which will be about 60 miles long.

Hendricks, W. Va.—The Swarthmore Lumber Co. of Moore's Siding will, it is reported, build an extension of several miles to its railroad. P. Alden & Son of Elkins, W. Va., are the engineers.

Hereford, Texas.—Hans Helland, chief engineer of the Panhandle Short Line, is reported as saying that construction is being rapidly pushed on this road, which will run from Hereford via Dimmick and Lubbock to Stanton, Texas, about 200 miles.

Itta Bena, Miss.—The Manufacturers' Record is informed that the Haley-Rucker Northwestern Railroad Co. proposes to extend from three to ten miles next year along Quiver river, northward.

Jackson, Miss.—Fred W. Herrick of Milwaukee is reported to have left Jackson with a party of engineers to make a preliminary survey for the proposed Pearl River Valley Railroad from Jackson northeast.

Kansas City, Mo.—The Missouri Pacific Railway, it is reported, will put 85-pound rails on all its line from Kansas City to Omaha, and will relay 60 miles of track this winter. E. F. Mitchell is engineer of construction at St. Louis, Mo.

Knoxville, Tenn.—An official letter to the Manufacturers' Record says that the Knoxville, Sevierville & Eastern Railway Co. is chartered to build from South Knoxville via Sevierville to the Tennessee and North Carolina boundary, 52 miles, and the first section, from Knoxville to Sevierville, 26 miles, is to be finished before the rest is begun. It is hoped to begin construction early next spring. W. A. Seymour is chief engineer; president, C. S. McManus; directors, S. B. Luttrell, W. P. Chamberlain, Alexander W. McMillan, E. G. Oates, D. M. Rose and others.

Lawton, Okla.—The Manufacturers' Record is officially informed that construction on the Kansas, Lawton & Gulf Railway has been indefinitely postponed. J. M. Bellamy and others are interested.

Leslie, Ark.—Frank H. Kennedy is reported to have cleared right of way from Cotton Plant to Helena, Ark., 53 miles, for the extension of the Missouri & North Arkansas Railway. He will next work between Cotton Plant and White River 12 miles. The company, it is reported, has let contract to the Dalhoff Construction Co. of Little Rock, Ark., for bridging and tracklaying from Kensett to Cotton Plant, Ark., and for grading from Kensett to the White river. The extension from Seligman, Ark., to Neosho, Mo., is to be completed by December 15.

Little Rock, Ark.—Mr. L. Garrett, vice-president and general manager of the Little Rock & Hot Springs Electric Railway Co., writes the Manufacturers' Record that the line will be 56 miles long from Little Rock to Hot Springs. Construction is to begin as soon as all of the preferred stock, amounting to \$500,000 at 6 per cent., has been subscribed for. He says that \$400,000 have been already placed.

Marion, S. C.—The Raleigh & Charleston Railroad, it is reported, will be extended through Marion to a proposed plant of the Wisconsin-Carolina Lumber Co., two and one-half miles south. L. A. Boyd is general manager at Marion.

McKinney, Texas.—The Texas & New Mexico Railway Co. is reported to have completed survey for 90 miles and to have graded four miles on its proposed line from McKinney via Denton, Krum, Bridgeport and Jackboro to West, Texas, 175 miles; contract not let. M. J. Healy is reported as vice-president and general manager at McKinney.

Memphis, Tenn.—An ordinance which has passed its first reading in the City Council requires the Southern Railway to raise its tracks at Lamar street, where the city is to build a subway. W. H. Wells is engineer of construction at Washington, D. C.

Mill Creek, W. Va.—The Valley River Railroad Co. is reported to be grading between Huttonsville and Elkwater, and work will be pushed through the winter. L. E. Shull is general manager at Mill Creek.

Moss Point, Miss.—W. Denny & Co., lumber manufacturers, contemplate building an extension of their railroad about five miles to connect with the Mobile, Jackson & Kansas City Railroad; part of grading finished and track material all on hand.

New Orleans, La.—Charles D. Haines of New York is reported to have bought a con-

trolling interest in the New Orleans, Fort Jackson & Grand Isle Railway, and he is quoted as saying that the road will probably be extended. F. Muller is secretary at New Orleans.

Oklahoma City, Okla.—Mr. P. H. Ladd, 19½ North Broadway, writes the Manufacturers' Record that the Oklahoma, Colorado & Pacific Railway Co. proposes to build from Oklahoma City to Trinidad, Col., about 650 miles, but construction will not begin until financial conditions are normal. The directors are George Silsby of Saginaw, Mich., and Oklahoma City, president; H. P. Ladd, vice-president, Oklahoma City; Edgar Turner, treasurer, Turney, Okla.; Herbert Huson and Mr. Patterson, both of Oklahoma City, the latter being secretary.

Oklahoma, Miss.—The Aberdeen & Tombigbee Railway Co. is reported to have finished surveys from Okolona, Miss., to Pikesville, Ala., 65 miles, via Woodson, Aberdeen, Lackey, Old Hamilton, Kalola Springs and Columbus, Miss. Grading is completed for 17½ miles from Okolona to Aberdeen and for 11½ miles from Columbus to Pikesville. Work is being done by the company's forces, 50 miles of the line being in Mississippi and six in Alabama. H. E. Reynolds is president and W. T. McKee chief engineer, both at Aberdeen, Miss.

Roscoe, Texas.—The Roscoe, Snyder & Pacific Railway is reported to have completed its bridge over Cottonwood river and to have track material for 32 miles, from Roscoe to Snyder. A later report says tracklaying is in progress and will be finished by January 1.

Sallisaw, Okla.—The St. Louis, Springfield, Oklahoma & Western Railway Co. has, it is reported, been granted 60 miles of right of way, and it is expected construction will begin within six months. The line is to run from Sallisaw via McAlester and Sulphur to Lawton, Okla., 250 miles. W. A. Squires is president of the North Texas & Oklahoma Promoting Co., and it is reported that financing plans have been agreed upon. J. F. D. Jennings of Oklahoma City is attorney.

Stamford, Texas.—Survey is reported completed for the Stamford & Northwestern Railway to Dickens county, 20 miles, by Chief Engineer Bogart. L. M. Bule of Stamford and S. M. Swenson & Co. of New York are reported to be interested.

Stephenville, Texas.—The Stephenville North & South Texas Railway Co. is reported to have laid track from Stephenville to a point within four miles of Hamilton, Texas, and the line will shortly be finished to that point, a total of 35 miles.

St. Louis, Mo.—The Terminal Railroad Association of St. Louis proposes extensive improvements, including the building of team track yard for 1100 cars and other yards. The work is to be extensive, and, including viaduct, buildings, etc., will demand an expenditure of \$4,000,000. W. S. McChesney, Jr., is president and general manager.

Talladega, Ala.—The Atlanta, Birmingham & Atlantic Railway Co. will have, it is reported, 50 miles of grade between Talladega and Birmingham ready for track by January 1.

Tellico Plains, Tenn.—The Manufacturers' Record is officially informed that the Tellico River Lumber Co. will be extended up the South river about four miles next year. The company is now constructing three miles from Buck branch to the South fork of the Tellico river, which will be completed by the end of December.

Timpson, Texas.—An official of the Timpson Northwestern Railway Co. is reported as saying that track is laid to a point within a mile of Long Branch and contracts are let to complete it within 14 miles of Henderson, Texas.

Washington, Ga.—The Washington & Elberton Construction Co., capital \$75,000, has applied for a charter to build the proposed railroad from Washington to Elberton and finally to Hartwell, Ga. The incorporators are M. M. Elkam of Macon, Ga.; J. H. Blackwell of Elberton, Ga.; W. H. Hudson of Atlanta, Ga.; V. E. Hudgens of Duluth, and J. J. Wilkinson, W. J. Adams, J. A. Moss, C. D. Bolton and S. S. Bobo of Tignall, Ga. The promoters are quoted as saying that all is ready for construction.

Washington, N. C.—The Washington Investment Co., it is reported, will build a motor-car line from Washington to Washington Heights, and thence to Cow Head Mineral Springs and on to Williamston, N. C.

Wheeling, W. Va.—The Pennsylvania Company, it is reported, will build a large freight yard at New Cumberland Junction, W. Va. Thomas Rodd is chief engineer at Pittsburgh, Pa.

Woodward, Okla.—The Santa Fe, Liberal &

Englewood Railway Co. is reported to have resumed construction in Oklahoma on its line from Raton, N. M., to Liberal, Kansas. H. A. Ensign of New York is president.

## STREET RAILWAYS

Americus, Ga.—The Americus Railway & Light Co. will, it is reported, begin construction of its electric railway, four miles long, in January, to be completed by May 1 next. A. N. Walker, president of the Southern Public Service Co., has charge of the work.

Ardmore, Okla.—Donald Fitzgerald of New York, who bought the Ardmore Street Railway franchise, is reported as saying that preliminary survey will be made within a few days and construction begun.

Ardmore, Okla.—The plans of the Ardmore Traction Co., it is stated, provide for having in operation three or four miles of street railway extension by July next. D. Fitzgerald of New York and others are interested.

New Orleans, La.—The New Orleans Railway & Light Co., it is reported, proposes to devote all its surplus earnings for the present to improvements. E. C. Foster is president.

Sumter, S. C.—Mr. John L. Alnutt writes the Manufacturers' Record that if the City Council grants the franchise he has requested, his company will build about 10 miles of line in the city, after which attention will be given to the construction of an interurban system in the country around Sumter.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Alcohol Machinery.—C. L. Hill, care of Ohio Machinery & Construction Co., Rockefeller Building, Cleveland, Ohio, wants addresses of manufacturers of machinery for making denatured alcohol.

Aluminum.—A. H. Lovelace, Box 24, Jefferson, Ga., wants quotations on sheet aluminum 1-16 and 1-8-inch thick.

Belting.—David E. Sayre, Mobile, Ala., wants belting for lath and shingle mill.

Boiler.—Texas Excelsior Manufacturing Co., Marshall, Texas, wants second-hand 50 to 60-horse-power boiler.

Boiler.—Cairns-Piper Supply Co., 915-916 First National Bank Building, Birmingham, Ala., wants second-hand 150-horse-power boiler.

Boiler.—A. J. Patterson, Greenville, Tenn., wants 20 to 30-horse-power boiler; new or second-hand.

Boilers.—Georgia Barytes Co., Box 228, Asheville, N. C., wants 20 to 25-horse-power engine and boilers (portable).

Boilers.—Joseph E. Bowen, Bank of Commerce Building, Norfolk, Va., is in market for two boilers, 50-horse-power hoisting engine for compound air; must be good and cheap; prompt shipment for cash.

Brick Machine.—Geo. H. Polk, Seoba, Miss., wants to buy brick machine.

Bridge Construction.—Commissioners of Chatham county, Savannah, Ga., will open bids December 30 for furnishing material and erecting steel highway drawbridge over the Great Ogeechee river at Kings Ferry in Chatham county; certified check for 5 per cent. of bid; usual rights reserved. Plans and specifications on file at office of Commissioners of Chatham county and ex-officio Judges, or of Superintendent of Public Works and Roads, Savannah, Ga.; G. Reuben Butler, clerk, Savannah, Ga.

Bridge Construction.—Council committee on streets, Lynchburg, Va., will open bids December 7 at office of H. L. Shaner, City Engineer, for construction of wooden footbridge on Harrison street; bond, \$1000; certified check, \$200, payable to A. R. Long, chairman street committee. Plans can be seen, specifications and forms of proposals, etc., can be obtained at office of City Engineer; usual rights reserved.

**Building Materials.**—Aktiebolaget Linotol-Beton, Fabiansgatan 27, Helsingfors, Finland, prepared to correspond regarding building materials, especially those of a novel nature.

**Building Supplies.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on lumber, millwork, hardware, slag roofing, glass, cement and lighting and heating fixtures for 900 double dwellings.

**Canning Equipment.**—A. J. Patterson, Greenville, Tenn., wants complete canning outfit; new or second-hand.

**Canning Machinery.**—William Chesterfield, Van Buren, Ark., is in market for complete canning equipment for several factories.

**Case-hardening Compound.**—Southern Locomotive & Car Manufacturing Co., Valdosta, Ga., in market for case-hardening compound; wants to correspond with manufacturers.

**Cement.**—See "Building Supplies."

**Chair Machinery.**—Koreshan Unity Co-operative, E. B. Webster, manager, Bristol, Tenn., wants chair machinery (special).

**Church Furniture.**—See "Racks."

**Cider and Vinegar Plants.**—William Chesterfield, Van Buren, Ark., wants two complete cider and vinegar making plants.

**Coatings.**—See "Paints."

**Colonial Columns.**—W. B. Camp, 20 Main street, Jacksonville, Fla., wants estimates on three large colonial columns.

**Concrete Machinery, etc.**—Aktiebolaget Linotol-Beton, Fabiansgatan 27, Helsingfors, Finland, prepared to correspond regarding machinery for making concrete building materials, etc.

**Concrete Mixers.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on concrete mixing machinery for making concrete blocks for 900 double dwellings.

**Concrete-block Machinery.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on concrete-block machinery for making blocks for 900 double dwellings.

**Conveyors.**—See "Sprocket Chain."

**Conveyors.**—Georgia Barytes Co., Box 228, Asheville, N. C., wants conveyors.

**Corn-oil Cakes.**—Durlieux & Morpurge, 2 Rue Adolphe Thiers, Marseilles, France, want to correspond with American manufacturers of corn-oil cakes with view to representation for sale in France.

**Cotton Yarns.**—National Duck Mills, Simpson and Lambert streets, Atlanta, Ga., in market for cotton yarns; sevens three-ply and twelves three-ply, on tubes.

**Cross-ties.**—Bids will be received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until December 17 to furnish at Navy Yard, Charleston, S. C., 1500 cypress cross-ties. Applications for proposals should refer to Schedule 587. Blank proposals furnished on application to Navy Pay Office, Charleston, S. C., or to the Bureau; E. B. Rogers, Paymaster-General, U. S. N.

**Crusher.**—Arkansas Fuller's Earth Co., Little Rock, Ark., wants crusher.

**Crushing Machinery.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on stone-crushing machinery.

**Darning Machines.**—White Swan Laundry Co., 315 South 20th street, Birmingham, Ala., wants machines for darning hosiery with regular darning cotton.

**Dredges.**—Escude & Potts, Apartado 331, City of Mexico, want to correspond with manufacturers of power dredges relative to representation in Mexico.

**Drier.**—Arkansas Fuller's Earth Co., Little Rock, Ark., wants drier.

**Drilling Machinery.**—See "Tunnelling Machinery."

**Electric Equipment.**—R. H. Phillips, 1410 H street N. W., Washington, D. C., wants to buy for Kensington Railway Co. two General Electric motors, standard gauge, in connection with passenger car. (See "Railway Cars.")

**Electrical Material.**—Bids will be received at office of H. F. Hodges, General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until December 23 for furnishing electrical material, consisting of cable, wire, flexible conduit, wire attachments, switches, etc. General information relating to Circular No. 405 obtained from above office or office of assistant purchasing agents, 24 State street, New York; Custom-house New Orleans; 1086 North Point street, San Francisco, Cal., and 410 Chamber of Commerce Building, Tacoma, Wash.; also from Chief Quartermaster, Chicago; Depot Quartermaster, St. Louis; Depot Quar-

master, Jeffersonville, Ind., and Chief Quartermaster, Atlanta, Ga., and at U. S. Engineer Office in following cities: Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville and Mobile.

**Electric-lighting Equipment.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on electric-lighting machinery and equipment for central plant for 900 dwellings.

**Engine.**—See "Gasoline Engine."

**Engine.**—Cairns-Piper Supply Co., 915-916 First National Bank Building, Birmingham, Ala., wants 125-horse-power engine; second-hand.

**Engine.**—Georgia Barytes Co., Box 228, Asheville, N. C., wants 20 to 25 horse-power engine (portable).

**Engine and Boiler.**—Arkansas Fuller's Earth Co., Little Rock, Ark., wants 50-horse-power engine and boiler.

**Engine and Boiler.**—Texas Excelsior Manufacturing Co., Marshall, Texas, wants second-hand engine and boiler, 50 to 60 horse-power.

**Engine-building Machinery.**—R. L. Beasley, Gordon, Ala., may buy machinery for building hoisting engines.

**Engines.**—See "Tunnelling Machinery."

**Gas Lighting.**—See "Street-lighting Equipment."

**Gasoline Engine.**—Oriental Publishing Co., Oriental, N. C., needs 2½-horse-power gasoline engine.

**Gins.**—E. A. Allen, care of Bank of Maringouin, Maringouin, La., wants to correspond with manufacturers of moss gins, complete with press.

**Heating Plant.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on steam-heating equipment for central plant to supply 900 double dwellings.

**Hoisting Engines.**—Arkansas Fuller's Earth Co., Little Rock, Ark., wants two 10 to 15 horse-power hoisting engines.

**Iron Drums.**—Westover Paper Co., Richmond, Va., in market for 110-gallon second-hand iron drums.

**Knitting Machines.**—Ehlers Bros., Grant Park, Ill., want to correspond with manufacturers of hosiery and other knitting machinery.

**Knitting Machinery.**—See "Darning Machinery."

**Lighting.**—See "Street-lighting Equipment."

**Lighting Fixtures.**—See "Building Supplies."

**Locomotive.**—John F. Riley Foundry and Machine Works, 12 South street, Charleston, S. C., wants second-hand locomotive in good condition, standard gauge, about 9 or 10-inch cylinders. State price and particulars as to condition.

**Mining Machinery.**—See "Tunnelling Machinery."

**Miscellaneous Supplies.**—Bids will be received at office of H. F. Hodges, General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until December 27 for furnishing furniture, refrigerators, sanitary fixtures, valves, wrought-iron pipe, compressed-air heater, etc. General information relating to Circular No. 406 obtained from above office or office of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco, Cal., and 410 Chamber of Commerce Building, Tacoma, Wash.; also from Chief Quartermaster, Chicago; Depot Quartermaster, St. Louis; Depot Quartermaster, Jeffersonville, Ind., and at U. S. Engineer Office in following cities: Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville and Mobile.

**Naphtha Lighting.**—See "Street-lighting Equipment."

**Organs.**—Lamar Furniture Co., Lamar, S. C., wants to correspond with manufacturers of low-priced organs with view to exclusive representation in Darlington, Florence, Williamsburg and Lee counties of South Carolina.

**Paints.**—Carolina Portland Cement Co., Atlanta, Ga., wants to correspond with manufacturers of high-grade mixed paint for coating metal roofs and all classes of iron structures; also manufacturers of high-class material for coating felt and similar roofs.

**Piping.**—Georgia Barytes Co., Box 228, Asheville, N. C., wants black iron piping, 1-inch and 2-inch.

**Pipefittings, etc.**—Bids will be received at Bureau of Supplies and Accounts, Navy De-

partment, Washington, D. C., until December 10 to furnish at Naval Academy, Annapolis, Md., quantity of pipefittings, oil burner, forge. Applications for proposals should refer to Schedule 570. Blank proposals furnished on application to Navy Pay Office, Baltimore, Md., or to the Bureau; E. B. Rogers, Paymaster-General, U. S. N.

**Piping.**—Eagle Handle & Heading Co., Rector, Ark., wants second-hand one-inch piping.

**Pulleys and Shafting.**—David E. Sayre, Mobile, Ala., wants pulleys and shafting.

**Pulverizer.**—Arkansas Fuller's Earth Co., Little Rock, Ark., wants pulverizer of 15 to 20 tons capacity.

**Pump Manufacturers.**—Edward C. Hart, 125 East 56th street, Chicago, Ill., wants to correspond with pump manufacturers in irrigation districts with view to having pumps manufactured for irrigation trade.

**Pumps.**—Georgia Barytes Co., Box 228, Asheville, N. C., wants pumps.

**Racks.**—Burnett & Kearfoot, Pile Building, 6th and State streets, Bristol, Tenn.-Va., want catalogues and prices on hat and coat or book racks for church pews.

**Railway Cars.**—R. H. Phillips, 1410 H street N. W., Washington, D. C., wants to buy for Kensington Railway Co. one second-hand closed passenger car, double-truck, vestibuled ends, equipped with two General Electric motors, standard gauge.

**Railway Equipment.**—See "Locomotive."

**Railway Rails.**—Herald Michelsen, Post Box 65, Christiania, Norway, states that the Norway State Railways invite offers to furnish 4522 tons of rails, proposals to be opened January 10. Mr. Michelsen wants manufacturers to submit binding offers through him, commission to be 10 per cent. Copy of specifications on file with Manufacturers' Record.

**Railway Rails.**—S. C. Montgomery, secretary Eschitt, Red River & Northern Railroad Co., Eschitt, Okla., wants addresses of dealers in new and second-hand steel rails.

**Revolving Screens.**—Georgia Barytes Co., Box 228, Asheville, N. C., wants revolving screens.

**Road Machinery.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on road machinery for constructing macadam roadways for suburban development containing 900 double dwellings.

**Roofing.**—See "Building Supplies."

**Roofing.**—Parrott & Crabtree, Kinston, N. C., want roofing.

**Sawmill.**—Parrott & Crabtree, Kinston, N. C., want light right-hand sawmill, new or second-hand, for 20-horse-power engine.

**Saws.**—Parrott & Crabtree, Kinston, N. C., want new or second-hand iron swing cut-off saw.

**Sewer Construction.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on materials for construction of sanitary sewerage system for suburban development containing 900 double dwellings.

**Shafting and Pulleys.**—Parrott & Crabtree, Kinston, N. C., want shafting and pulleys; new or second-hand.

**Shingle Mill.**—Parrott & Crabtree, Kinston, N. C., want shingle mill; new or second-hand.

**Signs.**—George E. Sherman, Chatsworth, Ga., wants to correspond with manufacturers of signs or signboards suitable for attaching to fences, trees, etc.; signs about 1x3 feet or 2x4 feet; weatherproof; two colors; good block lettering; would want 50 or 100 of a kind, probably total of 100,000.

**Sprocket Chain.**—David E. Sayre, Mobile,

Ala., wants sprocket chain for conveying sawdust.

**Street Construction.**—Gerhard Morgner, engineer in charge of Road Improvement District No. 1, Little Rock, Ark., will open bids January 2 at office of Road and Bridge Commissioner for Pulaski county, in courthouse, for improvement and construction of West 12th street, according to plans and specifications now on file at above-mentioned office, from city limits west to a point on Mount Ida road, a distance of 19,683 feet; certified check, \$500; usual rights reserved; Charles Heckler, F. Kanis and Adam Penzel, board of directors Road Improvement District No. 1.

**Street-lighting Equipment.**—Baltimore (Md.) Board of Awards, City Hall, will receive bids until December 11 for furnishing street gas and naphtha lamp fixtures and operation and maintenance of same throughout the city in accordance with specifications to be had from Robert J. McCuen, Superintendent of Lamps and Lighting, City Hall.

**Tanks.**—See "Iron Drums."

**Telephone Equipment.**—Unicel Telephone Co., R. N. McInturff, secretary-treasurer, Unicel, Tenn., wants telephone equipment, including wire, pins, insulators, telephones, etc.

**Telephone Poles.**—J. R. Lowery, secretary Alden Telephone Co., Alden, Okla., wants telephone poles.

**Terra-cotta Piping.**—S. A. Nettles, Southern Christian Advocate, Spartanburg, S. C., wants prices on about 100 feet 30 and 36-inch terra-cotta drain piping.

**Tunnelling Machinery.**—Walter Howard Crawford, 407½ Church street, Nashville, Tenn., invites proposals for complete plant to drive tunnel through granite and porphyry; location, five miles from Bladec, Ariz.; altitude for machinery is 5400 feet above sea-level; good wagon road haul; price of coal delivered is \$15 per ton and of wood \$6 per cord; possibly distillate internal-combustion engines more economic; give full details in first letter.

**Umbrella Supplies.**—George R. Parker, Wadesboro, N. C., wants addresses of manufacturers of umbrella covers, handles, etc.—materials complete for assembling.

**Washers.**—Georgia Barytes Co., Box 228, Asheville, N. C., wants log or ore washers.

**Water-works Machinery.**—Forestglen Land Co., Charles F. Behrens, manager, 961 Calvert Building, Baltimore, Md., wants prices on machinery and equipment for water-works to supply 900 double dwellings.

**Woodworking Machinery.**—Ronda Coop & Egg Case Co., Ronda, N. C., in market for second-hand small pony planer, 16 to 18 inches, and cigar-box planer, 12 to 16 inches.

**Woodworking Machinery.**—S. H. Crum, Orangeburg, S. C., wants to correspond with manufacturers of machinery for making buggy shafts, singletrees, etc.

**Woodworking Machinery.**—Koreshan Unity Co-operative, E. B. Webster, manager, Bristol, Tenn., wants sanding machines for flat and round work, dowel machines, four-sided molders, shaper, mortising machines and special chair machinery.

**Woodworking Machinery.**—Parrott & Crabtree, Kinston, N. C., want knot mover and bunched and hand edgers for boards; new or second-hand.

**Woodworking Machinery.**—Eagle Handle & Heading Co., Rector, Ark., wants Oram heading jointer and Ralya heading turner; second-hand.

**Woodworking Machinery.**—Spurrer-Williams Lumber Co., Livingston, Tenn., wants double surfacer, planer and matcher; new or second-hand.

## INDUSTRIAL NEWS OF INTEREST

### Wants Coatings and Paints.

The Carolina Portland Cement Co., Atlanta, Ga., wants to arrange to represent manufacturers of high-grade mixed paint for coating metal roofs and all classes of iron structures; also high-class material for coating felt and similar roofs. Prompt correspondence is invited.

### Edwards, Walter & Parnham, Architects.

Messrs. Edwards & Walter, the well-known architects of Columbia, S. C., will remove to Atlanta, Ga., about January 1, and will associate with them C. D. Parnham of Atlanta. Offices have been secured in the Candier Building, and the new firm will be known as Edwards, Walter & Parnham. They will continue to give their attention to general architecture, furnishing plans and specifications for any kind of structure.

Messrs. Edwards and Walter are at present official architects for the States of South Carolina and Florida, and are now preparing plans for the University of Florida. Mr. Parnham is well known in his territory, having been for some time connected with the Art Metal Construction Co. of Atlanta.

### Contract for Bridge.

The Southwestern Bridge Co. of Joplin, Mo., has received contract at \$11,573 to build a bridge across the Neosho river near Chanute. The crossing consists of one 200-foot span, one 70-foot span and two 30-foot steel approaches, the roadway being 20 feet. Work will be completed about June 1, 1908.

### Announcement of New Officials.

The Tennessee Coal, Iron & Railroad Co. of Birmingham, Ala., is announcing by official notice the following appointments



and changes: Geo. G. Crawford has been elected president; L. T. Beecher has been elected secretary and treasurer, vice W. A. Green, resigned; F. B. Winslow has been elected auditor, vice T. M. Nesbitt, resigned.

#### One Thousand Tons of Bars.

The Expanded Metal & Corrugated Bar Co. of St. Louis, Mo., has just completed shipment of 1000 tons of open hearth steel corrugated bars for the United States Reclamation Service. This material is being used on irrigation works in connection with the Tieton project. The order is one of several the company has received for corrugated bars for irrigation work.

#### August Metz Iron Foundry and Machine Works.

Last week lengthy reference was made to the Metz & Weiss engines for using common crude oil as fuel, a feature of the machine being the introduction of steam with the charge. In mentioning the name of the builder of the engines the name "Metz" was inadvertently omitted; that is, the builder is the August Metz Iron Foundry and Machine Works of 128 Mott street, New York city.

#### Improved Metal Railway Tie.

The Pepple Metallic Railway Tie Co. of Hillsboro, Texas, has produced a metal tie which is claimed to be free from all defects and a positive success. The principal feature of this tie is said to be a thoroughly efficient method of fastening the rail to the tie, which can be made in any form of inverted trough and of any dimensions desired. J. W. Pepple is president of the company; F. P. Works, secretary; R. D. Robey, vice-president, and R. O. Potts, treasurer.

#### Another Myers Pump Patent.

A patent has been granted to P. A. Myers covering the construction of the hydro-pneumatic cylinder manufactured by Messrs. F. E. Myers & Bro. of Ashland, Ohio. It covers the construction of the pump with a water-pumping cylinder and an air-pumping cylinder of larger diameter, pistons for said cylinders operating in unison, and a common discharge for the air and water, the air cylinder being provided with a by-pass, whereby the operator has control of the air pressure.

#### The Oliver Electric Co.

Several weeks ago reference was made to the incorporation of the Oliver Electric Co. of Birmingham, Ala., the capital stock being \$6000. The company will handle generally electrical machinery and supplies, acting as agent for manufacturers and attending to general repairs, rewinding motors, generators, etc. It has a completely-equipped shop for rewinding armatures and manufacturing field coils. Samuel W. Oliver is president and general manager, and James P. Balding is secretary-treasurer.

#### The Edison Portland Cement Co.

Owing to the increased demand for Edison Portland cement in the South, the manufacturer of that brand has opened an office in the National Bank Building, Savannah, Ga., in order to better serve the trade than from the more distant point, New York. George F. Balmer is in charge at Savannah. As soon as the necessary arrangements can be completed the company will carry a stock at the various seaports, which will enable it to give very prompt deliveries. The Edison Portland Cement Co. is of New York, Philadelphia and other cities.

#### Corrugated Metal Road Culverts.

Road commissioners and county supervisors throughout Virginia will welcome the establishment of a plant for manufacturing corrugated metal road culverts. This plant is being built at Richmond, Va., by the Virginia Metal Culvert Co., offices at 1703 East Cary street. It will produce corrugated metal road culverts, using in their manufacture a special ingot iron, low manganese material exclusively. The managers of the rolling mill from which this iron is obtained have informed the Virginia Metal Culvert Co. that sales for this purpose alone were 9000 tons for the first half of the year, and that sales are increasing every month. Messrs. L. C. Stewart and M. A. Quinn are the proprietors of the Richmond company.

#### Mr. Geo. S. Blanchard.

The Carbolineum Wood Preserving Co. of New York announces that it has secured the services of George S. Blanchard, who until recently was interested in lumber, and more particularly treated lumber on the Pacific coast. Mr. Blanchard will make his headquarters in New York, and will also be actively engaged in supervising the treating operations of the Carbolineum Timber Treat-

ing Co., on the Atlantic coast, the company using the natural vacuum process. Mr. Blanchard has had considerable experience on the Pacific coast with this process, the company having five plants in operation at various points in Washington and Oregon. Special attention will be given to the treatment of ties, poles, bridge timbers, etc. Several interesting articles on wood preservation which appeared from time to time in the Western trade journals were written by Mr. Blanchard.

#### The Milburn Portable Light.

The Alexander Milburn Company of Baltimore, Md., announces its removal from 225 North Gay street to 507 West Lombard street, where better accommodations have been secured to show the Milburn light for all kinds of construction work. This portable lighting device has become widely used in this country because of its numerous advantages. It gives 5000 candle-power at a cost of less than 50 cents per night, the company states. No attention is required during use, the equipment can be recharged in 30 seconds, and is unaffected by wind or water. The Government is using the Milburn light, and the Board of the United States Life Saving Service reports recently referred to the light as follows: "The light was very powerful, fine printed matter being read at a distance of 300 feet, and objects 600 feet away being plainly visible. Small articles within a radius of 300 feet could be easily picked up."

#### Bitulithic Paving Contracts.

The Warren Bros. Company of 93 Federal street, Boston, Mass., announces the following recent contracts: Winston, N. C., 72,000 square yards of bitulithic awarded to Atlantic Bitulithic Co. of Richmond, Va.; Birmingham, Ala., Southern Bitulithic Co. of Nashville, Tenn., received additional contract for 2500 square yards of bitulithic; Toledo, Ohio, H. P. Streicher & Co., to lay 6325 square yards of bitulithic; Vancouver, Wash., 36,987 square yards of bitulithic being constructed by Warren Construction Co. of Portland, Ore.; Salem, Ore., additional contract for 14,429 square yards of bitulithic awarded to Warren Construction Co. of Portland, Ore.; Eugene, Ore., 2834 square yards of bitulithic will be laid by Warren Construction Co. of Portland, Ore.; Port Arthur, Ont., Warren Bituminous Paving Co. of Toronto, Ont., has contract for 6593 square yards of bitulithic; Toronto, Ont., additional contract for 2432 square yards of bitulithic awarded to Warren Bituminous Paving Co.; Fort Worth, Texas, Texas Bitulithic Co. of Dallas, Texas, has contract for 114,940 square yards of bitulithic, and Portland, Ore., additional contract for 15,892 square yards of bitulithic awarded to Warren Construction Co.

#### An American Installation in China.

An interesting story of a blower system in China is presented by the American Blower Co. of Detroit, Mich. This company says: "In November, 1906, we received a letter from the Hongkong Milling Co. as follows: 'We are erecting a 2000-barrel mill, and as we want to blow bran and shorts through a 12-inch pipe about 3000 feet (1500 feet of which is an up gradient of 1 inch in 10 inches and the remainder a downward gradient of same proportions), we would be glad if you would supply us with some of the necessary particulars.' As this information was hardly sufficient to intelligently handle such an unusual problem, and as it takes 30 days for a letter to reach Hongkong and 30 days more to get a reply, we cabled for the required data. The amount to be conveyed was given as 6500 pounds per hour, the pipe to slope upward to a height of 150 feet for a distance of 1500 feet from the fan, and then decline to the point of discharge, which would be 3280 feet from the fan. The fan furnished was of special proportions and construction throughout, driven by a direct-connected electric motor, wound for 220 volts direct current. Two fans and motors were furnished, so that if anything happened to one the other could be used while repairs were being made. The pipe was of 16 inches diameter, of heavy galvanized iron. It was made up, boxed and shipped in lengths of about 16 feet. At one end of each section was a hand hole, so that the end of the section could be easily riveted together and soldered tight. As each joint was finished hand hold covered plates were soldered on over the hand holes. Everything was done to make it easy to erect the outfit by the purchasers, as the mechanics at their command were reported as being very poor. As negotiations progressed there was every indication that we were the only manufacturers figuring on this. We were curious to learn why the company came to us, so wrote them to that effect soon after the account

was closed. It then developed the proposition had been submitted to every blower manufacturer the company could locate in America and Europe, and that all declined to attempt it. That we accomplished it successfully is evident in the following letter from the Hongkong company: 'As so many experts have visited our mills of late inspecting our plant and Diesel engines, we think it only right to inform you that all of them have expressed their greatest surprise and satisfaction when we showed them one of our fans blowing bran 3280 feet through a 16-inch-diameter pipe. The volume in the receiving warehouse was so great that one of our European employees was almost smothered before we got him out. To say that your blowers are a success does not half express what they have accomplished. When we are not transporting bran we use the blower to ventilate our building, 280x160x55 feet high, and it does its work beautifully.'

#### TRADE LITERATURE.

##### Electrical and Steam Machinery.

Electrical and steam machinery for central stations, street railways and isolated plants is a class of mechanical equipment in constant demand. It comprises engines, boilers, dynamos, generators, alternators, motors, etc. Purchasers of this kind of machinery are invited to note the large and miscellaneous stock of electrical and steam machinery offered by the Charles E. Dustin Co. of 11 Broadway, New York. This company's stock is listed in a pamphlet now being distributed among those interested.

##### Economy in Ice Plants.

It is presumable that all managers of ice-manufacturing plants are ready to hear of improvements in mechanical appliances which will enable them to effect economies in operating their plants. Managers who are seeking information in this direction are invited to read "Economy in Ice Plants." This is a leaflet issued by the Atmospheric Condensation Co. of Kansas City, Mo., and tells about that company's device for promoting economical operation in ice plants. The device is Pennell's flat type steam condenser.

##### Ferracute Metal Presses.

Manufacturers who need metal presses in their plants should not fail to examine the latest leaflet issued by the Ferracute Machine Co. of Bridgeton, N. J. This publication describes briefly, also illustrates, various presses, which are made in hundreds of sizes and styles for every kind of work. It lists a press with side punch, adapted for cutting, forming or redrawing heavy sheet metal, punching presses, cutting presses, drawing presses, boring and wiring presses, embossing and coning presses, hand and foot presses, gravity or drop presses, stamping presses, etc.

##### Dallett's Bulletin.

Among current industrial publications that serve the interests of prospective buyers of railway equipment and supplies, electrical machinery, power plants, engines, boilers and other mechanical manufactures is Dallett's Bulletin. This gives particulars of the machinery and supplies which Messrs. Dallett & Co. have in stock for shipment, and full details of some of the offerings are presented in each issue of the Bulletin. Steam shovels, locomotive cranes and locomotives are illustrated in the current Bulletin. Messrs. Dallett & Co. have their offices at 611 and 612 Harrison Building, Philadelphia, Pa.

##### An Interesting Graphite Publication.

The December number of "Graphite" is an interesting publication. It includes the street-railway section, these pages having illustrations and descriptions of the recent street-railway convention at Atlantic City. The splendid half-tone illustrations of famous Atlantic City hotels, boardwalks, piers, and the Dixon graphite exhibit and sand figures make "Graphite" a unique souvenir of Atlantic City, the street-railway convention and the Joseph Dixon Crucible Co. of Jersey City, N. J. This company is well known for its various graphite productions, and is prepared to send copies of its publication to any inquirer.

##### Storage Batteries for Portable Use.

Dealers in and users of portable storage batteries will find that information of value to them is presented in a new Westinghouse publication now being distributed. This is an illustrated pamphlet which gives particulars of the Westinghouse storage batteries for portable service, and is the manufacturer's initial publication devoted exclusively to this class of batteries. While the Westinghouse Machine Co. has been manu-

facturing storage batteries for several years, it has heretofore devoted its battery literature to stationary storage batteries. The Westinghouse Machine Co. can be addressed at East Pittsburgh, Pa., for copies of the new pamphlet.

##### The Traylor Concentrating Table.

One of the most modern American plants for manufacturing mining and metallurgical machinery is that of the Traylor Engineering Co. It is well located for loading products for shipment and has in constant service a large force of engineers to design and build mining plants. A recent publication of the company is an illustrated pamphlet describing in detail the Traylor concentrating table, which is offered to mining companies as possessing superior features for their purposes in handling ores of various kinds. The Traylor Engineering Co., consulting, mechanical and metallurgical engineer, has its offices at No. 2 Rector street, New York city.

##### Methods of an Engineering Organization.

An interesting publication is an illustrated pamphlet now being distributed to present the methods and work of an engineering organization. It is pamphlet No. 16 of the series which Messrs. Dodge & Day have been issuing for the benefit of people concerned in the work of such engineering organizations as theirs—for planning and building industrial plants, enlarging established enterprises or effecting economies in the operation of works in existence. Information of value and hints to managers of manufacturing industries who want to keep informed regarding the latest developments in engineering are presented in the pamphlet.

##### As to Greensboro, N. C.

People who may contemplate investigating with a view of locating in the South, either to establish a home or a business enterprise, should not fail to examine the advantages of Greensboro, N. C. This is one of the progressive cities of its section, with a population of about 42,000 and numerous advantages for manufacturing and mercantile establishments. It has raw materials for manufacturing, banking facilities to finance enterprises, shipping facilities for sending products to market, successful agricultural territory in the surrounding territory, educational and religious facilities, etc. An interesting booklet telling the details is being distributed by the Chamber of Commerce of Greensboro.

##### National Electric Lamp Literature.

The National Electric Lamp Association is now distributing bulletins which will interest people who are concerned in electric lighting and the use of the latest improved types of electric lamps. These bulletins are from the association's engineering department and refer especially to the Tungsten street series lamp, tantalum regular and tantalum meridian lamps and units and data on illumination. They present data, illustrations and tables that are of value to engineers, architects, members of electrical associations and to various others. The association is maintained by the leading manufacturers of electric lamps throughout the country. It can be addressed at 4411 Hough avenue, Cleveland, Ohio, for copies of the bulletins.

##### The Sturtevant Steam Turbine.

Ever alert to provide a prime mover best adapted to the peculiar requirements of small generators and fan blowers, and realizing the great advantages of direct connection over belts and gears, the B. F. Sturtevant Company began experimenting with the steam turbine as soon as the characteristics of the modern practical form had been demonstrated. Several years of persistent effort resulted in a fully developed line of steam turbines, proven by careful test and experiment. Actual performances have demonstrated its wide range of speed and power, its capacity for overload and continuous operation, with a minimum of attention and cost of maintenance. The Sturtevant steam turbine, of which an illustrated description appeared in the Manufacturers' Record recently, is described in detail in an illustrated pamphlet which the B. F. Sturtevant Company is now distributing. Write for one, addressing the company's offices at Hyde Park, Mass.

##### Mircs Oil-Burning Equipment.

The system of oil-burning for fuel is one destined to be extensively adopted throughout the industrial world. It is already largely used, and as the equipments are perfected greater attention is attracted to the economies possible with their use. The Mircs Fuel Oil Equipment Co. has become prominent in this field of endeavor, its oil-

burning equipment being adapted for all forging and heating purposes. Its system has already been selected by managers of large industrial corporations and by Government engineers. A pamphlet now being distributed by the company gives interesting particulars regarding the Mirco system and products. It presents photographic views to emphasize and explain the descriptions. It refers to Mirco forges, superheating flues, furnaces, burners, etc. Anyone interested in oil-burning for fuel is invited to write the company at Norfolk, Va., for copies of pamphlet and any other specific information that may be wanted.

#### Penberthy Engineering Literature.

Penberthy engineering literature is of a character that will interest and prove of value to people who are concerned with the operation of steam plants and other mechanical equipments wherein the injector or ejector has its usage. A regular Penberthy issue is the Penberthy Engineer and Fireman, which is distributed every month. It presents for November treatises on dynamos, speed supremacy of the Atlantic, detecting leaky valves in an ice plant, lining steam boiler furnaces, hints on building a power plant, lubrication of elevator and pump plungers, etc. It is evident the contents are comprehensive from an engineering standpoint. The Penberthy Injector Co. of Detroit, Mich., is the publisher of Penberthy literature. It is well known in all parts of the world for its automatic injector, which has established during a quarter of a century an enviable reputation for economy in steam consumption, scientific construction, durability, range of operation and reliability.

#### Municipal Improvements Under Way in Baltimore.

The progressiveness shown by the citizens of Baltimore after the great fire of 1904 by voting the expenditure of \$20,000,000 for municipal improvements continues to make itself felt. This is evidenced by the recent passage by the City Council of the ordinance of estimates for 1908, which carries with it appropriations for \$18,765,002, of which amount about \$12,000,000 is for the regular annual municipal expenditures, about \$5,000,000 for continuing the large improvements started immediately after the fire, and about \$2,000,000 for improvements of an entirely new nature. Much of this latter work is of a very important character, as it provides for a great part of the new facilities and equipment which have been found necessary in every municipal department to meet the demands of the city's growth and expansion. The school system will be enlarged by an appropriation of over \$750,000 for the construction of a number of new buildings, including those for the Baltimore Polytechnic Institute and a large addition to the Western Female High School. The fire department has been allowed \$740,000, of which \$465,000 will be used for the construction of a pipe-line system and pumping plant in the business section of the city, \$155,000 for the erection of five new engine and truck houses and \$20,000 for the installation of about 150 new fire-alarm boxes. The water department will have \$250,000 for the construction of new high-service reservoir. The city engineer will complete one large concrete bridge on the St. Paul boulevard and start the construction work on another concrete bridge 450 feet long over Gwynn's falls, and will pave a number of streets in various sections of the city. The electrical subway system will be further enlarged by extensions to cost about \$200,000.

To further the big improvements started after the fire about \$3,000,000 will be expended in continuing the construction work on the new sanitary and storm-water sewerage systems; about \$450,000 for the extension of the park system; \$500,000 for paving new streets in the Annex, and about \$900,000 for finishing the system of six new modern docks and piers.

Still broader plans are being considered by the city officials, and it is very probable that the next State Legislature will

be asked to approve a loan for \$5,000,000 for general improved paving work throughout the city and \$1,000,000 for continuing the park extension system.

#### The Appalachian Reserve.

At last week's meeting of the Atlanta section of the American Institute of Electrical Engineers the importance of prompt execution of the plan for the establishment of a great forest reserve in the Southern Appalachians was set forth in the following resolutions:

"WHEREAS, the effect of the destruction of the forest cover at the headwaters of streams is to diminish the natural water-storage capacity and thereby reduce the period of normal flow, while increasing periods of drought and flood; and

"WHEREAS, the value of water-powers is largely determined by the regularity of flow of the rivers on which they are located, and many water-powers have been seriously impaired by the removal of the forests which formerly protected them, this impairment frequently being permanent because of the impossibility of reforestation, due to the destruction of essential elements of the soil by fire and to its loss by erosion; and

"WHEREAS, many water-powers, the future existence of which is now threatened, can be rendered commercially available and of great value to the community through electric transmission; and

"WHEREAS, it is becoming increasingly difficult to obtain in sufficient quantity the timber required in conjunction with various electric industries, this being especially true in the case of hardwoods, as has been shown by the recent special investigation by the forest service; and

"WHEREAS, the only way in which a supply can be assured for the future is by the prompt introduction of scientific forestry, including the elimination of forest fires, such as has in general, with a few notable exceptions, been accomplished heretofore on a large scale only in forest reserves; and

"WHEREAS, certain important forests are at the present time being cut clean by lumbermen, exploiting the present without regard to the future, and, furthermore, leaving the land in such condition that the keeping out of fire is practically impossible; and

"WHEREAS, the price of forest land is rapidly rising, so that the appropriation necessary for the adequate protection of a given watershed is increasing steadily year by year; therefore be it

**Resolved,** That it is the opinion of the Southern section of the Institute of Electrical Engineers:

"That where forest reserves already exist, whether State or national, their area should not be reduced unless the land therein included is more valuable for agriculture than for forestry.

"That additional forest reserves should be promptly created on regions adapted by nature for the growth of hardwoods.

"That the headwaters of important streams should be protected by forest reserves; and

"That where, as in the case of New England and the Southern Appalachians, the rivers are of an interstate character, it is most desirable that the Federal Government establish national forests without delay; and be it further

**Resolved,** That the chairman and secretary of the Southern section be instructed to communicate these resolutions to all members of Congress from the Southern States and to the Governors of the same States."

The adoption of the resolutions followed stirring addresses by Mr. R. S. Kellogg of the Forest Service of the Government, Mr. M. R. Hall of the United States Geo-

logical Survey, Professor Ackerman of the University of Georgia, Mr. W. S. Lee of Charlotte, N. C.; ex-Governor Pardee and Mr. George H. Maxwell of California. Referring to the meeting, Mr. John H. Finney of Atlanta, who was elected president of the section, writes to the MANUFACTURERS' RECORD:

"I believe no more important thing is before us in the South today than this, and that we may be a distinct help in legislation looking toward setting aside the Appalachian forest at the present session of Congress, provided the sentiment of the South for it can be distinctly shown. In this campaign no greater help can be given us than the MANUFACTURERS' RECORD, and I am asking you to direct some of your well-known energy and forcefulness into this channel. The entire engineering profession is behind this movement, and I do believe that we can, by keeping at it, make the South to realize the importance of this matter and the absolute necessity of doing something if we are to preserve our waterways and hardwood supply. This seems to be an appropriate time to do this work. The Waterways Convention, to be held in Washington, is considering the improvement of our harbors and rivers, and public improvements of this character seem to be forging to the front. It is quite obvious that unless some action is taken we will have no Appalachian region to preserve, and it is my hope that our campaign can be backed up by so powerful a paper as your publication."

The factory building of the Armour Fertilizer Co. at Jacksonville, Fla., which was destroyed by fire in August, has been rebuilt and is ready for the installation of machinery. The structure is 320x240 feet, with an average height of about 50 feet.

The Bank of Swansea at Swansea, S. C., has organized with R. L. Lybrand, president; W. H. Witt, vice-president, and B. E. Craft, secretary and treasurer; directors, J. C. Reynolds, R. L. Lybrand, W. H. Witt, Frank E. Dreher, R. E. Inabinet, J. W. Lybrand and C. J. Rucker.

## FINANCIAL NEWS

### Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,  
Baltimore, Md., December 4.

The Baltimore stock market has been generally quiet this week, but with some activity toward the end of the period. In the trading United Railways common sold from 9 to 10; the trust certificates at 97; the income bonds from 43½ to 45¼, and ex-coupon from 43½ to 45¼; the funding 5s from 70 to 71, and ex-coupon from 68 to 72; the funding scrip at 71, and ex-interest from 68 to 72; United 4s, 81 to 82; Gas 6s, 101¼ to 102; Seaboard 4s, 63 to 63½; Western Bank, 35; Third National Bank, 120; G. B. S. Brewing incomes, 14 to 14½; United Light & Power 4½s, 83½.

Other securities were traded in as follows: Atlantic Coast Line stock, 62 to 67; Northern Central, 80½ to 81½; Western Maryland, 5 to 6; Anacostia & Potomac 5s, 96 to 95¼; Charleston & Western Carolina 5s, 99; Georgia Pacific 1sts, 101; Georgia & Alabama Consolidated 5s, 98; Western Maryland 4s, 60¼ to 62; Baltimore, Sparrows Point & Chesapeake 4½s, 85; Richmond & Danville Gold 6s, 105 to 107; Houston Oil common, 4½ to 5; Georgia, Carolina & Northern 5s, 98 to 99; Lexington Railway 5s, 95¼ to 96; West Virginia Central 6s, 101¼ to 100; Carolina Central 4s, 81¼; City & Suburban (Washington) 5s, 97½; Georgia Southern & Florida 5s, 101; Baltimore City 3½s, 1940; 92; Baltimore Traction 5s, 105; Louisville & Nashville (Atlanta, Knoxville & Cincinnati division) 4s, 82;

Atlantic Coast Line 4s, 84¼; Colorado Southern 4s, 80; Baltimore & Ohio, 82; Western New York & Pennsylvania 4s, 83; Petersburg B, 111.

### SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended  
December 4, 1907.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	69½	70½
Atlantic Coast Line of Conn.....	100	235	235
Georgia Sou. & Fla. 2d Pfd.....	100	75	75
Norfolk Railway & Light.....	25	18	18
Seaboard Company Common.....	100	9	9
Seaboard Company 1st Pfd.....	100	45	60
Seaboard Company 2d Pfd.....	100	25	25
Western Maryland.....	50	54½	6
United Ry. & Elec. Co.....	50	59	10½
Bank Stocks.			
Citizens' National Bank.....	10	29	33
Farmers & Mer. Nat. Bank.....	40	50	50
Merchants' National Bank.....	100	168	168
National Bank of Baltimore.....	100	104½	117
National Mechanics' Bank.....	10	26	26
National Union Bank of Md.....	100	110	110
Third National Bank.....	100	119	119
Trust, Fidelity and Casualty Stocks.			
American Bonding Co.....	25	49½	49½
Fidelity & Deposit.....	50	108	120
Maryland Casualty.....	25	56	56
Mercantile Trust & Deposit.....	50	100	120
Miscellaneous Stocks.			
Ala. Con. Coal & Iron Pfd.....	100	60	60
Con. Gas, Elec. Lt. & P. Pfd.....	100	75	75
Consolidation Coal.....	100	87	87
G. B. S. Brewing Co.....	100	2½	4
Georges Creek Coal.....	100	90	90
Railroad Bonds.			
Albany & Northern 5s, 1946.....	92¼	95	95
Atlantic Coast Line 1st 4s, 1952.....	83¾	85	85
Atlan. Coast Line 4s, Cfsa, 1952.....	72	72	72
Atlan. Coast Line (Conn.) 5s.....	102	102	102
Balto. & Harrisburg Ext. 5s, 1938.....	95	100	100
Carolina Central 4s, 1949.....	81	82	82
Charleston & West. Car. 5s, 1946.....	98¾	99	99
Coal & Iron Railway 5s, 1920.....	100	100	100
Columbia & Greenville 1st 6s, 1916.....	106	107	107
Georgia & Alabama 5s, 1945.....	98	98¾	98¾
Georgia, Car. & North, 1st 5s, 1929.....	88	98¾	98¾
Georgia Pacific 1st 6s, 1922.....	107	107	107
Georgia Sou. & Fla. 1st 5s, 1945.....	101	102	102
Maryland & Pennsylvania 4s, 1951.....	80	80	80
Norfolk & Carolina 5s, 1939.....	109	108	108
Petersburg, Class B 6s, 1926.....	109	112	112
Potomac Valley 1st 5s, 1941.....	101	105	105
Raleigh & Gaston 1st 6s, 1926.....	106	111	111
Raleigh & Gaston 5s, 1926.....	99½	99½	99½
Richmond & Dan. Gold 6s, 1915.....	107	108½	108½
Savannah, Fla. & West. 5s, 1934.....	106	106	106
Seaboard Air Line 4s, 1950.....	63½	64	64
Seaboard Air Line 5s, 10-year, 1911.....	89	93	93
Virginia Midland 2d 6s, 1911.....	100	100	100
Washington Terminal 3½s.....	82½	84½	84½
Western Maryland New 4s, 1952.....	62½	64	64
Western Maryland 2d 4s.....	50	50	50
West Virginia Central 1st 6s, 1911.....	101¼	101¼	101¼
Wilmington, Col. & Aug. 6s, 1910.....	99	102	102
Wilmington & Wel. Gold 5s, 1935.....	97	97	97
Wilmington & Weldon 4s.....	88½	95	95
Street Railway Bonds.			
Anacostia & Potomac 5s, 1949.....	96	96	96
Atlanta Con. Street Ry. 5s.....	98	98	98
Augusta Ry. & Elec. 5s, 1940.....	90	90	90
Baltimore City Pass. 5s, 1911.....	98½	99½	99½
Balto., Sp. Pt. & Ches. 4½s.....	86	81	81
Baltimore Traction 1st 5s, 1929.....	104½	105½	105½
Charleston City Ry. 5s, 1923.....	98¾	99	99
Charleston Con. Elec. 5s, 1939.....	90	90	90
City & Suburban 5s (Balto.), 1922.....	107	107	107
City & Suburban 5s (Wash.), 1948.....	97½	97½	97½
Lexington Ry. 1st 5s, 1949.....	95	95	95
Macon Ry. & Lt. 1st Con. 5s, 1953.....	85	82	82
Metropolitan 5s (Wash.), 1925.....	104½	106	106
Norfolk Railway & Light 5s.....	89	85	85
Norfolk Street Ry. 5s, 1944.....	102	102	102
North Baltimore 5s, 1942.....	105	105	105
Richmond Traction 5s.....	81¾	82½	82½
United Railways 1st 4s, 1949.....	81¾	82	82
United Railways Inc. 4s, 1949.....	45½	46	46
United Railways Funding 5s.....	71	72	72
Miscellaneous Bonds.			
Consolidated Gas 6s, 1910.....	102	102½	102½
Consolidated Gas 5s, 1939.....	106¾	106¾	106¾
G. B. S. Brewing 1sts.....	39½	41	41
G. B. S. Brewing 2d Inc.....	14½	14½	14½
Maryland Telephone 5s.....	80	80	80
Mt. Vernon-Woodby Cot. Duck 5s.....	74	74	74
United Elec. Lt. & Power 4½s.....	82½	85	85

### Telephone Deal Closed.

The Maryland Telephone Co. of Baltimore has, it is announced, been purchased by interests which will continue to operate it independently. The Maryland was recently purchased by the Consolidated Gas & Electric Co. of Baltimore when it bought the Baltimore Electric Co., the latter having control of the Maryland. It was announced at the time of that deal that the Maryland Telephone Co. would be disposed of, and this has now been done. The new owners have taken charge of the property and have temporarily organized with H. P. Miller of Columbus, Ohio, as vice-president; Joseph Taylor and F. M. Twomey of New York and Dudley E. Browning of New Jersey as directors. Additional directors are to be chosen and a president is to be elected. Mr. Miller has taken charge of the property. It is understood that the new interests will continue to operate the Maryland Telephone system in connection with other independent systems for long-distance service as well as keeping it locally independent.

[For Additional Financial News, See  
Pages 80 and 81.]



See